Ontario
Ministry of the Environment
Ministère de l'Environnement

Central Region
Région du Centre

7 Overlea Boulevard
4th Floor
Toronto, Ontario
M4H 1A8
(416) 424-3000

7 boulevard Overlea
4e étage
Toronto (Ontario)
M4H 1A8
(416) 424-3000

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SECCHI DISC-CHLOROPHYLL A SELF-HELP PROGRAM

1985 SAMPLING RESULTS FOR LAKES IN THE CENTRAL REGION OF THE MINISTRY OF THE ENVIRONMENT

ISSN 0715-0261

1) ALLEN LAKE, Dudley & Harcourt Twps.,Haliburton
2) ANSTRUTHER LAKE, Anstruther Twp., Peterborough
3) BALSAM LAKE, Bexley Twp., Victoria
4) BASS LAKE, Orilla & Oro Twps., Simcoe
5) BAT LAKE, Minden Twp., Haliburton
6) BEECH LAKE, Stanhope Twp., Haliburton
7) BELLA LAKE, Sinclair Twp., Twp. of Lake of Bays, Muskoka
8) BELMONT LAKE, Belmont & Methuen Twps., Peterborough
9) BIG BARNHAM LAKE, Dudley Twp., Haliburton
10) BIG STRAGGLE LAKE, Harcourt Twp., Haliburton
11) BIRCH BARK(TROUNCE) LAKE, Galway Twp., Peterborough
12) BLACK LAKE, Wood Ward, Twp. of Muskoka Lakes, Muskoka
13) BRUCE LAKE, Medora Ward, Twp. of Muskoka Lakes, Muskoka
14) BUCKSKIN LAKE, Monmouth Twp., Haliburton
15) CAMERON LAKE, Fenelon Twp., Victoria
16) CANNING LAKE, Minden & Snowdon Twps., Haliburton
17) CATCHACOMA LAKE, Cavendish Twp., Peterborough
18) CHANDOS LAKE, Twp. of Chandos, Peterborough
19) CLEAR LAKE, Digby Twp., Victoria
20) CLEARWATER LAKE, Morrison Ward, Town of Gravenhurst, Muskoka
21) CLEMENT LAKE, Monmouth Twp.,Haliburton
22) CREGO LAKE, Somerville Twp., Victoria
23) DOESKIN(DOE) LAKE, Muskoka Ward, Town of Gravenhurst, Muskoka
24) DUMMER LAKE, Dummer Twp., Peterborough
25) EAST LAKE, Harcourt Twp., Haliburton
26) ECHO LAKE, McLean Ward, Twp. of Lake of Bays, Muskoka
27) FARLAIN LAKE, Tiny Twp., Simcoe
28) FOUR MILE LAKE, Somerville Twp., Victoria
29) GEORGE'S LAKE, Harcourt Twp., Haliburton
30) GIBSON LAKE, Gibson Ward, Twp. of Georgian Bay, Muskoka
31) GO HOME LAKE, Gibson Ward, Twp. of Georgian Bay, Muskoka
32) GULL LAKE, Muskoka Ward, Town of Gravenhurst, Muskoka
33) HALIBURTON LAKE, Harburn Twp., Haliburton
34) HALLS LAKE, Stanhope Twp., Haliburton
35) HARP LAKE, Chaffey Ward, Town of Huntsville, Muskoka
36) HEAD LAKE, Laxton & Digby Twps., Victoria
37) HORSESHOE(ELSIE) LAKE, Minden Twp., Haliburton
38) JACK LAKE, Burleigh & Methuen Twps., Peterborough
39) KAHSHE LAKE, Morrison Ward, Town of Gravenhurst, Muskoka
40) KASHAGAWIGAMOG LAKE, Dysart & Minden Twps., Haliburton
41) KASSHABOG LAKE, Belmont & Methuen Twps., Peterborough
42) KAWAGAMA LAKE, Sherborne, Havelock, Livingstone and McClintock Twps., Haliburton
43) KENNISIS LAKE, Havelock & Guilford Twps., Haliburton
44) KOSHLONG LAKE, Glamorgan Twp., Haliburton

SECCHI DISC-CHLOROPHYLL A SELF-HELP PROGRAM CONT'D

45) KUSHOG LAKE, Stanhope Twp., Haliburton
46) LAKE OF BAYS, Twp. of Lake of Bays, Muskoka
47) LAKE MUSKOKA, Twp. of Muskoka Lakes, Muskoka
48) LAKE ROSSEAU, Twp. of Muskoka Lakes, Muskoka
49) LAKE SCUGOG, Scugog Twp., Durham
50) LAKE ST. JOHN, Rama Twp., Simcoe
51) LEECH LAKE, Oakley Ward, Town of Bracebridge, Muskoka
52) LITTLE GLAMOR LAKE, Monmouth & Glamorgan Twps., Haliburton
53) LITTLE KENNISIS LAKE, Havelock Twp., Haliburton
54) LITTLE LAKE, Cramahe Twp., Northumberland
55) LITTLE STRAGGLE LAKE, Harcourt Twp., Haliburton
56) LONG LAKE, Dudley Twp., Haliburton
57) LONG LAKE, Harcourt Park, Haliburton
58) LOON LAKE, Dysart Twp., Haliburton
59) LOON LAKE, Muskoka Ward, Town of Gravenhurst, Muskoka
60) LOONCALL LAKE, Burleigh Twp., Peterborough
61) MEDORA LAKE, Medora Ward, Twp. of Muskoka Lakes, Muskoka
62) MINDEN LAKE, Hinden & Minden Twps., Haliburton
63) MISKWABI LAKE, Dudley Twp., Haliburton
64) MISSISSAUGA LAKE, Harvey & Cavendish Twps., Peterborough
65) MOOT LAKE, McLean Ward, Twp. of Lake of Bays, Muskoka
66) MORRISON LAKE, Wood Ward, Town of Gravenhurst, Muskoka
67) MOUNTAIN LAKE, Minden Twp., Haliburton
68) MULDREW LAKE, Muskoka, Wood & Morrison Wards, Town of Gravenhurst, Muskoka
69) MUSKOKA BAY, Muskoka Ward, Town of Gravenhurst, Muskoka
70) OAK LAKE, Belmont & Methuen Twps., Peterborough
71) PENINSULA LAKE, Town of Huntsville, Muskoka
72) PERCY LAKE, Harburn Twp., Haliburton
73) PINE LAKE, Muskoka & Wood Wards, Town of Gravenhurst, Muskoka
74) PINE LAKE, Oakley Ward, Town of Bracebridge, Muskoka
75) REBECCA LAKE, Sinclair Twp., Twp. of Lake of Bays, Muskoka
76) RIL LAKE, Ridout Ward, Twp. of Lake of Bays, Muskoka
77) SALERNO LAKE, Snowdon & Glamorgan Twps., Haliburton
78) SALMON LAKE, Cavendish Twp., Peterborough
79) SHADOW LAKE, Somerville Twp., Victoria
80) SILVER LAKE, Muskoka & Morrison Wards, Town of Gravenhurst, Muskoka
81) SIX MILE LAKE, Baxter Ward, Town of Georgian Bay, Muskoka
82) SKELETON LAKE, Cardwell, Stisted, Stephenson and Watt Wards, Twp. of Muskoka Lakes, Muskoka
83) SOYERS LAKE, Minden Twp., Haliburton
84) SPAR LAKE, Lutterworth Twp. Haliburton
85) SPARROW LAKE, Morrison Ward, Town of Gravenhurst, Muskoka
86) STURGEON LAKE, Fenelon Twp., Victoria
87) SUNNY LAKE, Morrison Ward, Town of Gravenhurst, Muskoka
88) TALLAN LAKE, Chandos Twp., Peterborough
89) TASSO LAKE, Finlayson Ward, Twp. of Lakes of Bays, Muskoka
90) THREE MILE LAKE, Watt Ward, Twp. of Muskoka Lakes, Muskoka
91) TURTLE LAKE, Muskoka Ward, Town of Gravenhurst, Muskoka
92) TWELVE MILE BAY, Freeman Ward, Twp. of Georgian Bay, Muskoka
93) TWELVE NILE LAKE, Minden Twp., Haliburton
94) WASEOSA LAKE, Chaffey Ward, Town of Huntsville, Muskoka
95) WENONA(LITTLE DUDMON) LAKE, Dudley Twp., Haliburton
96) WOOD LAKE, Oakley Ward, Town of Bracebridge, Muskoka

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SECCHI DISC - CHLOROPHYLL A SELF-HELP PROGRAMME - 1985

The "Self-Help Programme" was initiated in 1971 in response to many requests from concerned cottagers for water quality surveys on many recreational lakes throughout the Province. In the Self-Help Programme, cottagers perform the sample collection on their lakes and the Ministry analyzes and interprets the water quality information.

Volunteers in the Self-Help Programme are supplied with sampling kits which include a Secchi disc, a water sampler, sample bottles and instructions. Participants are asked to take Secchi disc readings and collect water samples bi-weekly during the ice-free period of the year. The water samples are then shipped to the nearest Ministry of the Environment laboratory where they are analyzed for chlorophyll a. The true value of this program will only be realized if it is continued for a number of years in order to define long-term trends with regard to variations in the enrichment status of the lakes.

Enrichment of lakes occurs when fertilizing nutrients, such as nitrogen and phosphorus, enter the lake via rainfall, runoff from land, and shoreline development activities (i.e. subsurface disposal systems, land clearing, etc.). These nutrients promote the growth of aquatic plants and algae. It is important to realize that small to moderate amounts of aquatic plants and algae are necessary to provide food for fish. Too much growth, however, may interfere with water-oriented recreational activities.

Previous experience has indicated that there are three general categories of lake enrichment. All three categories exist in nature, however, man's activities can alter a lake's enrichment status. The transparency of the water as indicated by Secchi disc readings and the density of suspended microscopic aquatic plants, called algae, as indicated by chlorophyll a concentrations are measurements that are used to determine the enrichment status of a lake. The following table shows how these two measurements are interpreted to determine the enrichment status of a lake.

ENRICHMENT STATUS	SECCHI DISC (S.D.) (METERS - M)	CHLOROPHYLL A CONCENTRATION (CHL.A) (MICROGRAMS/LITRE - UG/L)
ENRICHED	0 - 3 M	4 UG/L OR GREATER
MODERATELY ENRICHED	3 - 5 M	2 - 4 UG/L
UNENRICHED	5 M OR GREATER	0 - 2 UG/L

ENRICHED LAKES

These lakes have high concentrations of nutrients and are characterized by excessive growths of algae and aquatic weeds. This may interfere with water-oriented recreational activities. As a result of the large amount of algae suspended in the water, Secchi disc readings are generally less than 3 meters and chlorophyll a concentrations are 4 ug/L or greater.

MODERATELY ENRICHED LAKES

These lakes have moderate concentrations of nutrients and are characterized by moderate growth of algae and aquatic weeds. They are suitable for the pursuit of water oriented recreational activities, however, they may develop periodic problems such as algae blooms. Secchi disc readings range from 3 to 5 meters and chlorophyll a concentrations range from 2 to 4 ug/L.

UNENRICHED LAKES

These lakes are the most desirable from a recreational standpoint. If these lakes are deep, they may support a cold water fishery such as lake trout. These are usually clear-water lakes, with low concentrations of nutrients. Secchi disc readings are 5 meters or greater and chlorophyll a concentrations are less than 2 ug/L.

Allen Lake

Dudley & Harcourt Twp.

County of Haliburton

Table 1: Secchi disc (m) and chlorophyll $\underline{a}$ (ug/L) data collected from Allen Lake in 1985

Station	Main	
Date	S.D.	Chl.$\underline{a}$
May 20	6.25	L 0.9
May 26	7.0	L 0.6
June 6	8.0	UR
June 23	6.5	L 0.9
July 1	7.25	L 0.9
July 28	4.75	1.9
Aug 5	4.75	1.8
Aug 11	4.5	2.2
Aug 18	5.0	2.1
Sept 2	5.0	2.0
Oct 14	5.75	L 0.8
	5.9	L 1.4

L - less than
UR - unreliable sample result

Once again, an excellent sampling was done on Allen Lake with 11 sampling occasions. The degree of water transparency was consistently high again this year with Secchi disc readings ranging from 4.5 m to 8.0 m. The chlorophyll $\underline{a}$ concentrations were consistently low ranging from less than 0.6 to 2.2 ug/L. The highest densities of suspended algae occurred during late August or early September. The overall water quality of Allen Lake continues to be excellent.

Figure 1: The relationship between Secchi disc and chlorophyll $\underline{a}$ for Allen Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means.

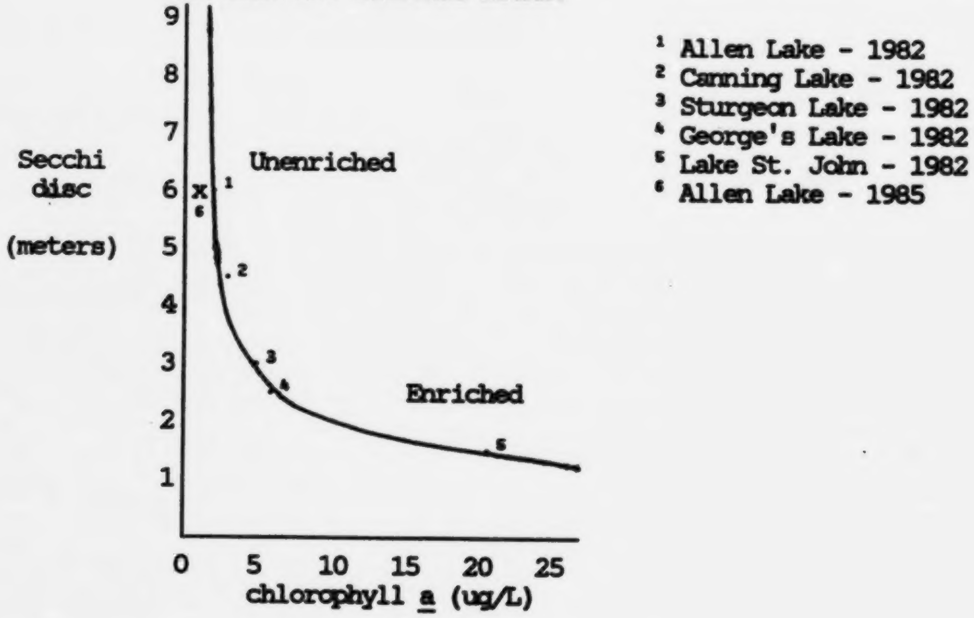
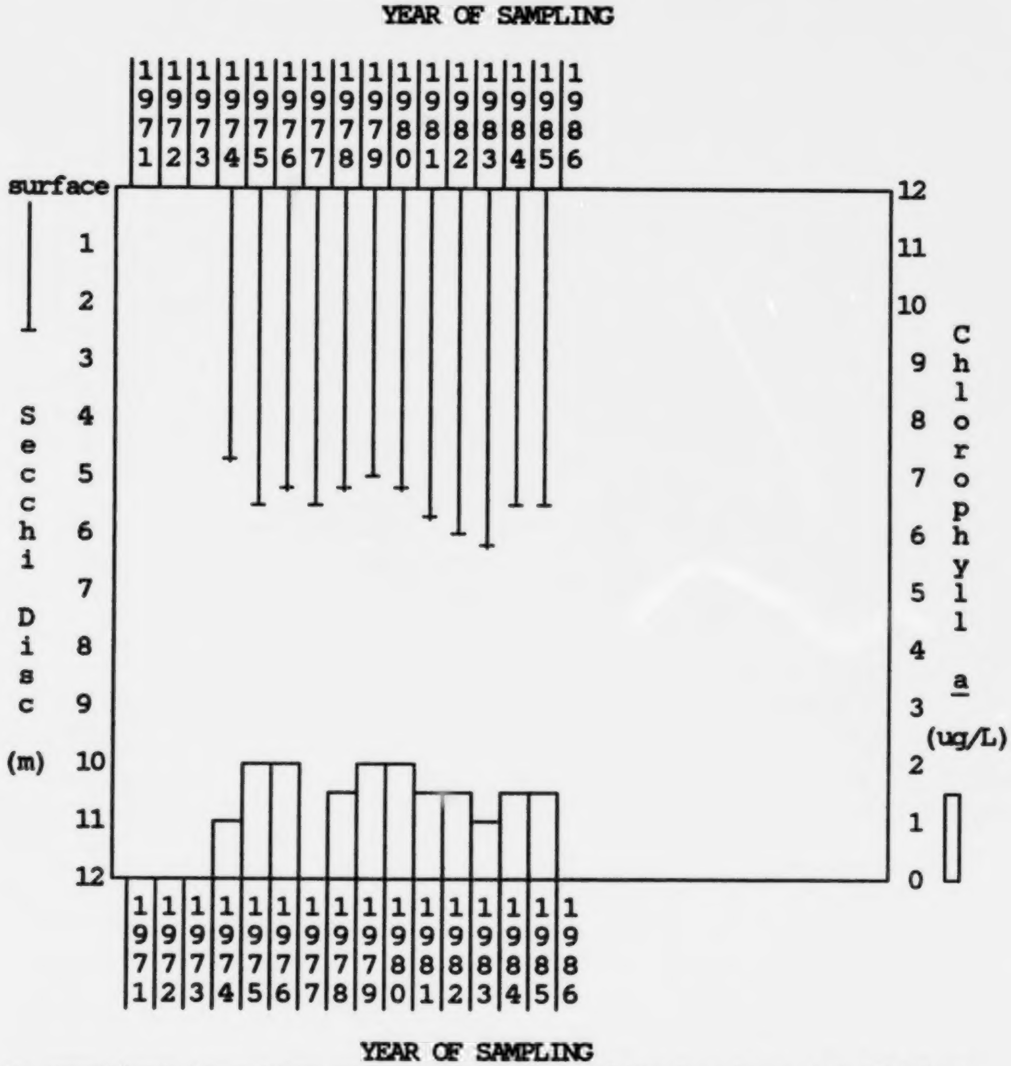


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Allen Lake from 1974 to 1985. Seasonal mean data (more than 6 sampling dates) only.



An excellent long term record of water quality has been established for Allen Lake with 11 years of reliable data.

This record indicates that there has been no overall change in water quality in Allen Lake since 1972 with Secchi disc readings ranging from 5 to 6 m and chlorophyll a concentrations ranging from 1 to 2 ug/L.

From 1979 to 1983 there was an increasing trend in the water clarity which corresponded to a period of decline in the densities of suspended algae.

Water quality of Allen Lake continues to be excellent.

Anstruther Lake

Anstruther Township

Peterborough County

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Anstruther Lake in 1985

Station	North End		South End	
Date	S.D.	Chl.a	S.D.	Chl.a
July 1	4.5	N R	4.5	N R
July 13	5.0	N R	4.5	N R
July 21	5.0	N R	4.5	N R
Aug 4	6.5	1.6	5.0	2.3
Sept 14	5.5	3.2	5.5	2.9
	-----	-----	-----	-----
	5.3		4.8	

N R - no results received for this sample

In 1985, the early sampling results for Anstruther Lake were never received for chlorophyll. Based on the available results, the degree of water clarity was high at the North End and moderately high at the South End.

The chlorophyll results received for August and September were low to moderately low.

Figure 1: The relationship between Secchi disc and chlorophyll a for Anstruther Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means.

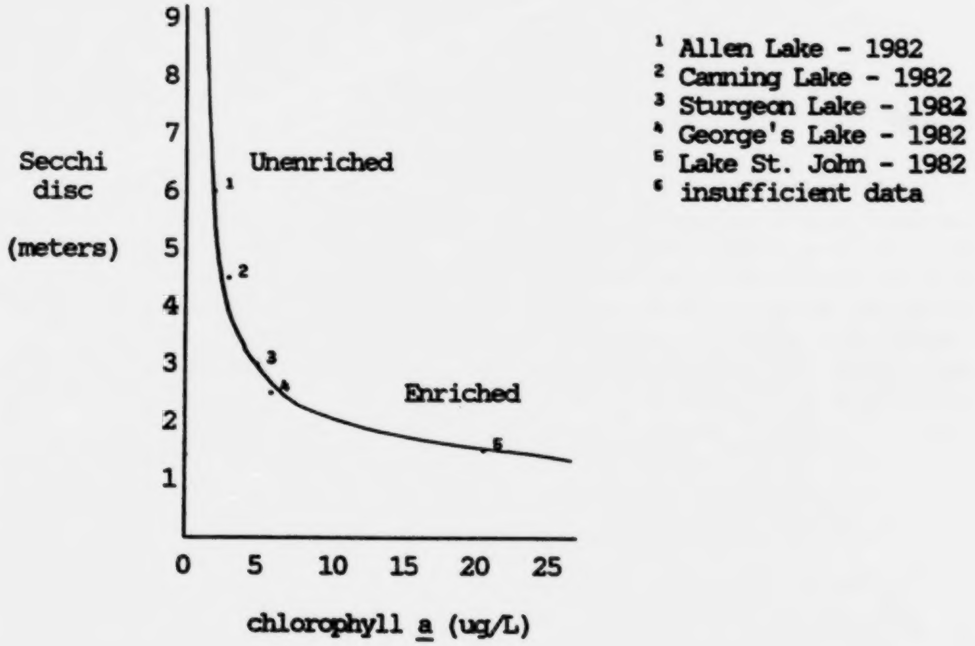
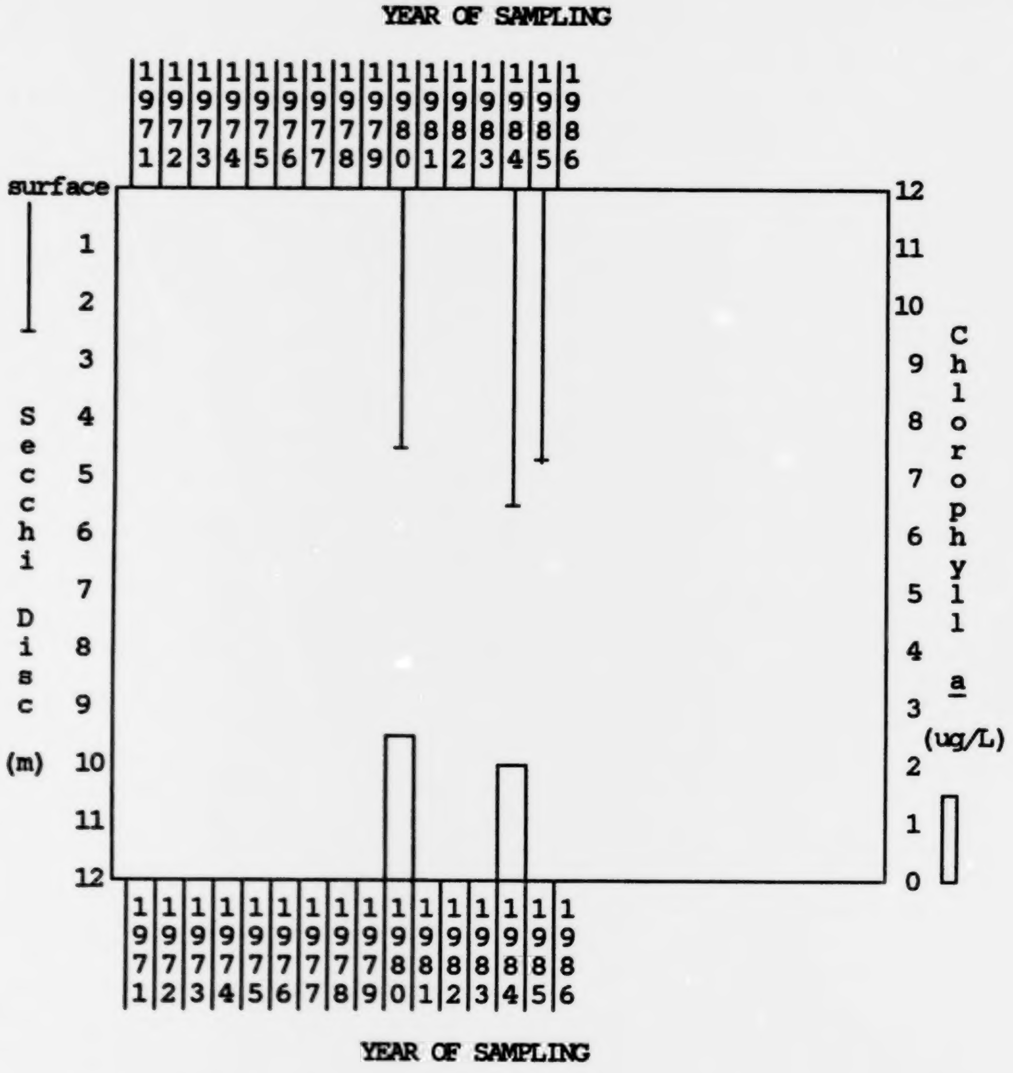
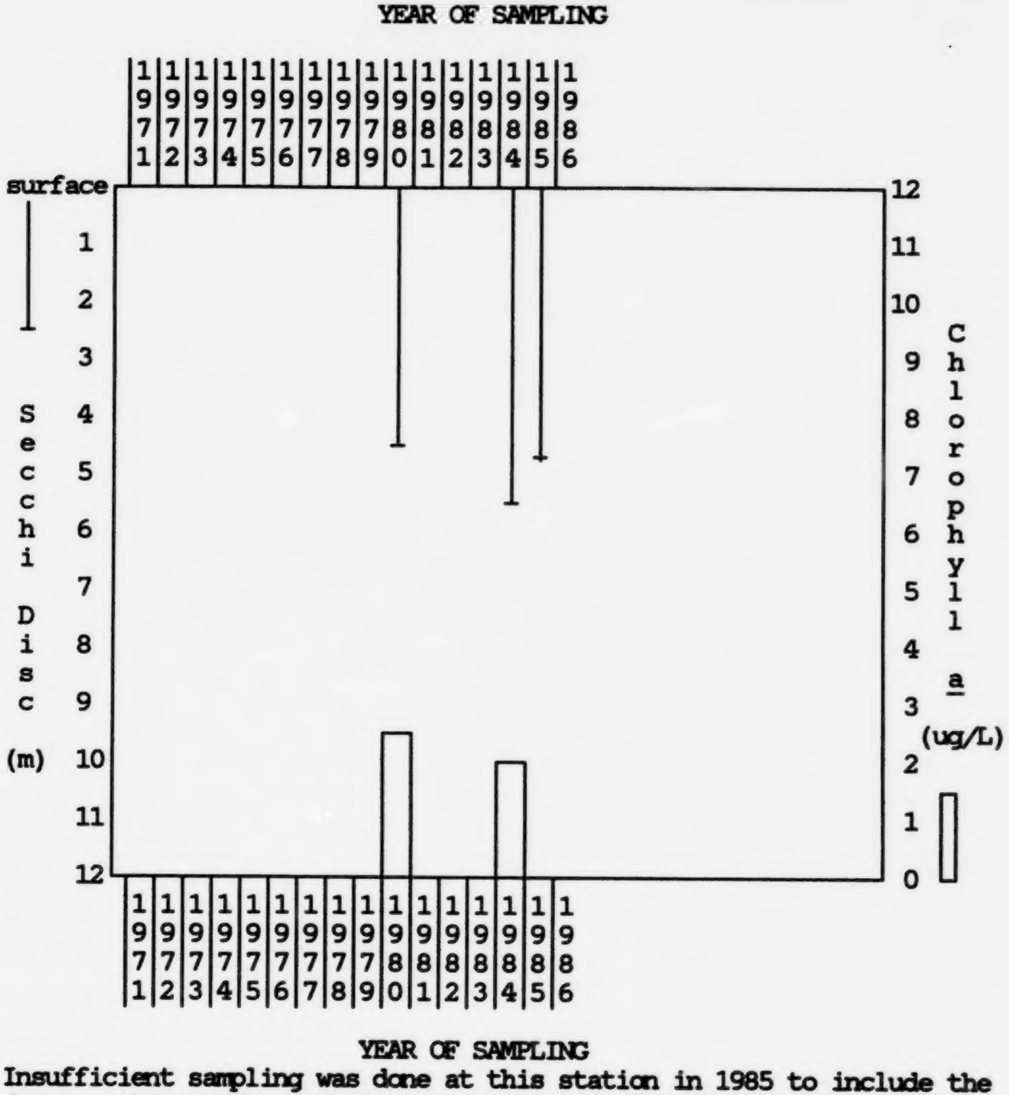


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Anstruther Lake (North End) from 1980 to 1985. Seasonal mean data (more than 6 sampling dates) only. A minimum of 4 results were required for graphing.



Insufficient sampling was done at this station in 1985 to include the data on the graph. Past results indicate that the degree of water clarity continues to be moderate to high and densities of suspended algae are moderate to low. We recommend that sampling be continued in 1986 with increased frequency to establish a long-term record of water quality. Anstruther Lake continues to be borderline between moderately enriched and unenriched.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Anstruther Lake (South End) from 1980 to 1985. Seasonal mean data (more than 6 sampling dates) only. A minimum of 4 results were required for graphing.



Insufficient sampling was done at this station in 1985 to include the data on this graph. Based on past results, the degree of water clarity has been moderate to high and the densities of suspended algae have been moderate to low at this station. Anstruther Lake has been borderline between moderately enriched and unenriched.

Balsam Lake (page 1)

Bexley Township

Victoria County

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Balsam Lake in 1985

Station	Station 3 Lightning Pt.		Station 5 South Bay		Station 8 Grand Island		West Bay	
Date	S.D.	Chl.a	S.D.	Chl.a	S.D.	Chl.a	S.D.	Chl.a
June 16	- -	- -	- -	- -	4.0	2.8*	- -	- -
June 23	- -	- -	- -	- -	5.5**	3.2**	- -	- -
July 1	- -	- -	- -	- -	4.5**	3.4**	- -	- -
July 28	4.5	1.6*	2.8**	2.4*	- -	- -	- -	- -
Aug 5	5.0	U R	2.8	1.4*	- -	- -	- -	- -
Aug 11	5.0	2.0*	- -	- -	4.0**	2.6**	- -	- -
Aug 18	6.0	1.3*	- -	- -	- -	- -	3.8	2.9
Aug 25	- -	- -	- -	- -	- -	- -	4.0	3.6*
Sept 1	6.0	1.8*	- -	- -	5.5**	3.2**	- -	- -
Sept 2	- -	- -	- -	- -	- -	- -	3.8	3.2
Sept 7	4.5	L0.9*	- -	- -	- -	- -	- -	- -
Sept 15***	4.5	1.3*	- -	- -	- -	- -	- -	- -
Sept 29	5.0	1.0*	- -	- -	- -	- -	- -	- -
Oct 14	5.0	L0.6*	- -	- -	- -	- -	- -	- -
	-----	------	-----	-----	-----	-----	-----	-----
	5.1	L1.3*			4.7	3.0		

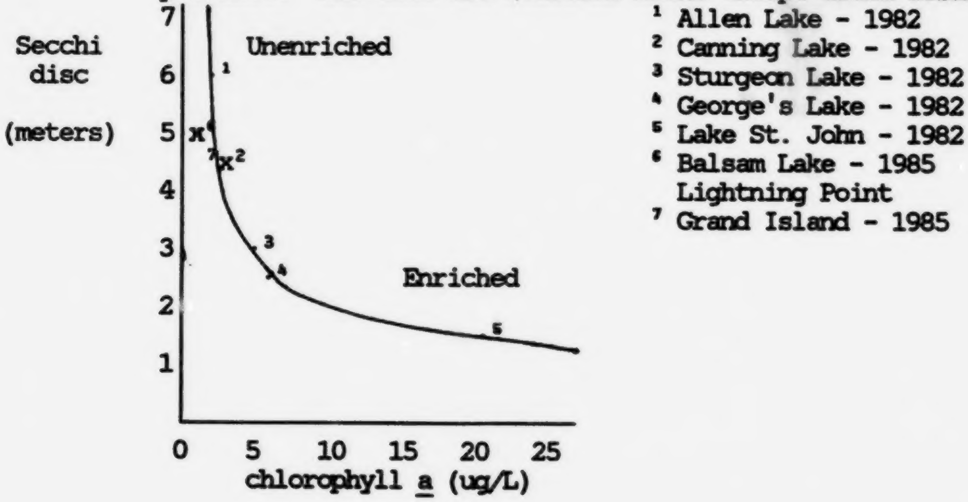
* chlorophyll samples taken through a depth less than twice Secchi disc

** no station location given *** no station or date given

U R - unreliable result L - less than

For text see attached page

Figure 1: The relationship between Secchi disc and chlorophyll a for Balsam Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means except Grand Island.



Balsam Lake (page 2)

Bexley Township

Victoria County

The results from sampling in 1985 are difficult to interpret since Lightning Point was the only station sampled on more than 6 occasions and the chlorophyll a samples were not taken through a depth of twice the Secchi disc reading presumably due to shallowness at this station. Chlorophyll a concentrations at this station were low, ranging from less than 0.6 ug/L to 2.0 ug/L and averaging less than 1.3 ug/L.

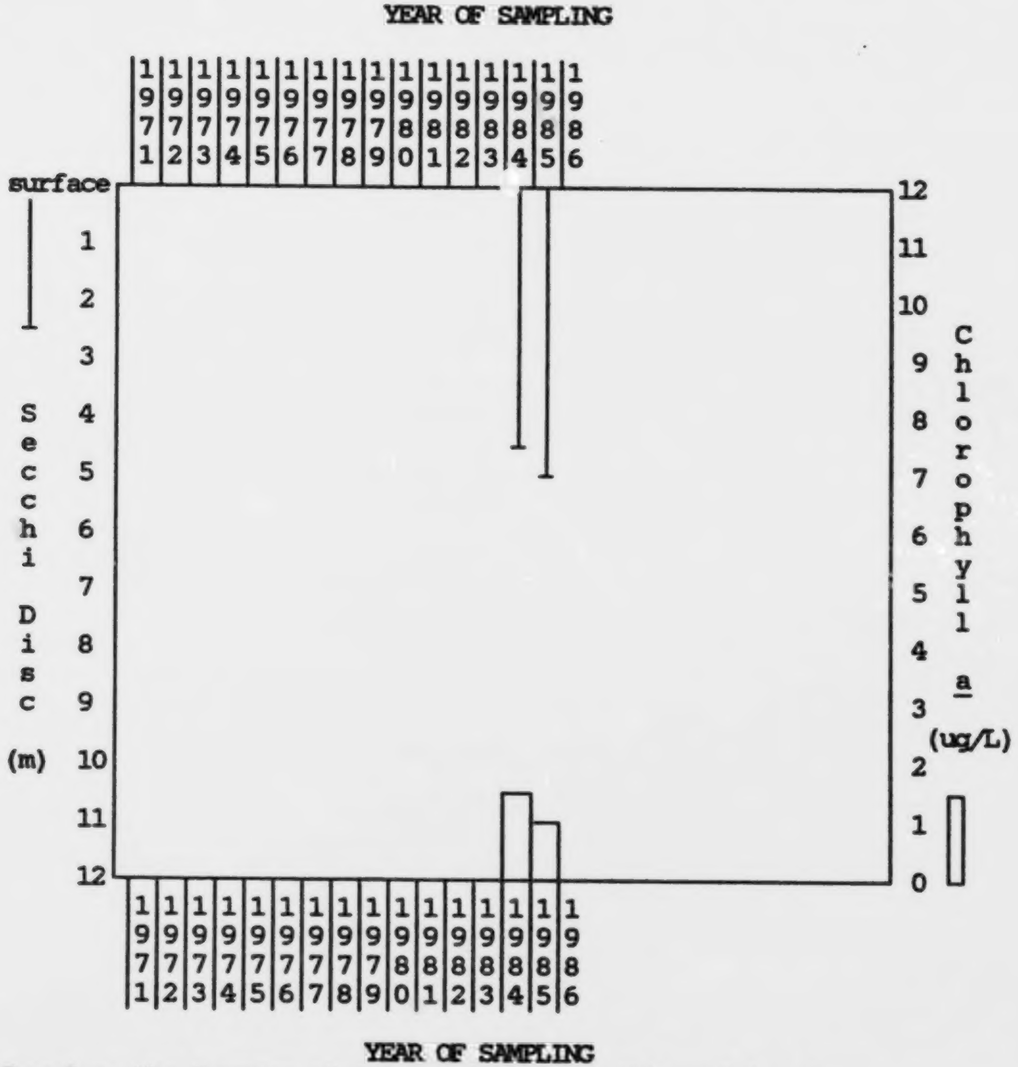
Secchi disc readings at Lightning Point averaged 5.1 m indicating a high degree of water clarity.

At Grand Island, sampling was done on 5 occasions. The only chlorophyll sample taken through a depth less than twice the Secchi disc reading was on June 16. Chlorophyll a concentrations were moderately low ranging from 2.6 to 3.4 ug/L and averaged 3.0 ug/L, indicating that moderate densities of suspended algae were present. Secchi disc readings averaged 4.7 m at Grand Island indicating a moderately high degree of water transparency.

Based on the 1985 results, Balsam Lake would be considered moderately enriched with good water quality.

If sampling is continued in 1986, please be sure to enter all of the important information on the submission forms including sampling date, station location description, lake name and Secchi disc readings.

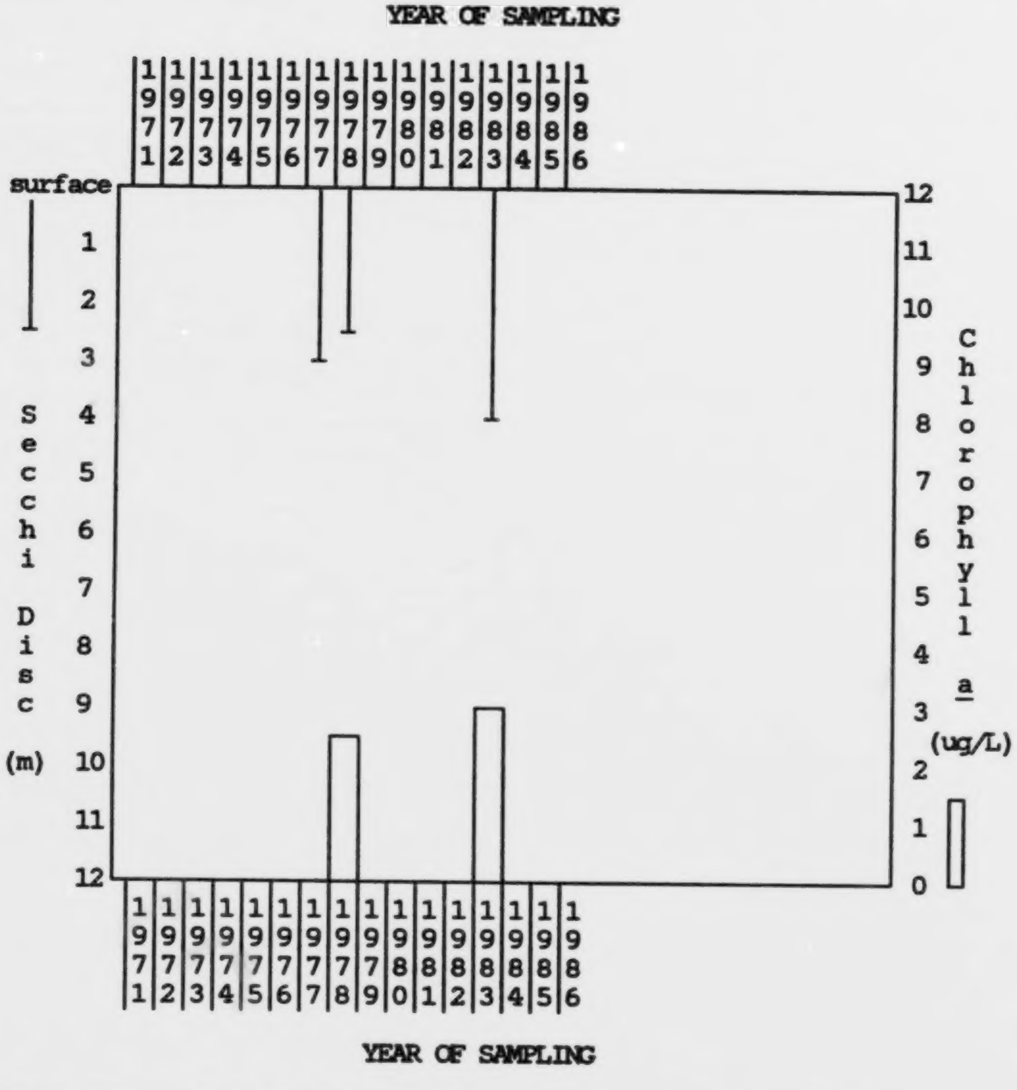
Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Balsam Lake (Lightning Point) from 1984 and 1985. Seasonal mean data (more than 6 sampling dates) only.



Based on the 2 years of data available for Balsam Lake at Lightning Point, water quality continues to be very good. The degree of water clarity has been moderate to high and densities of suspended algae have been low.

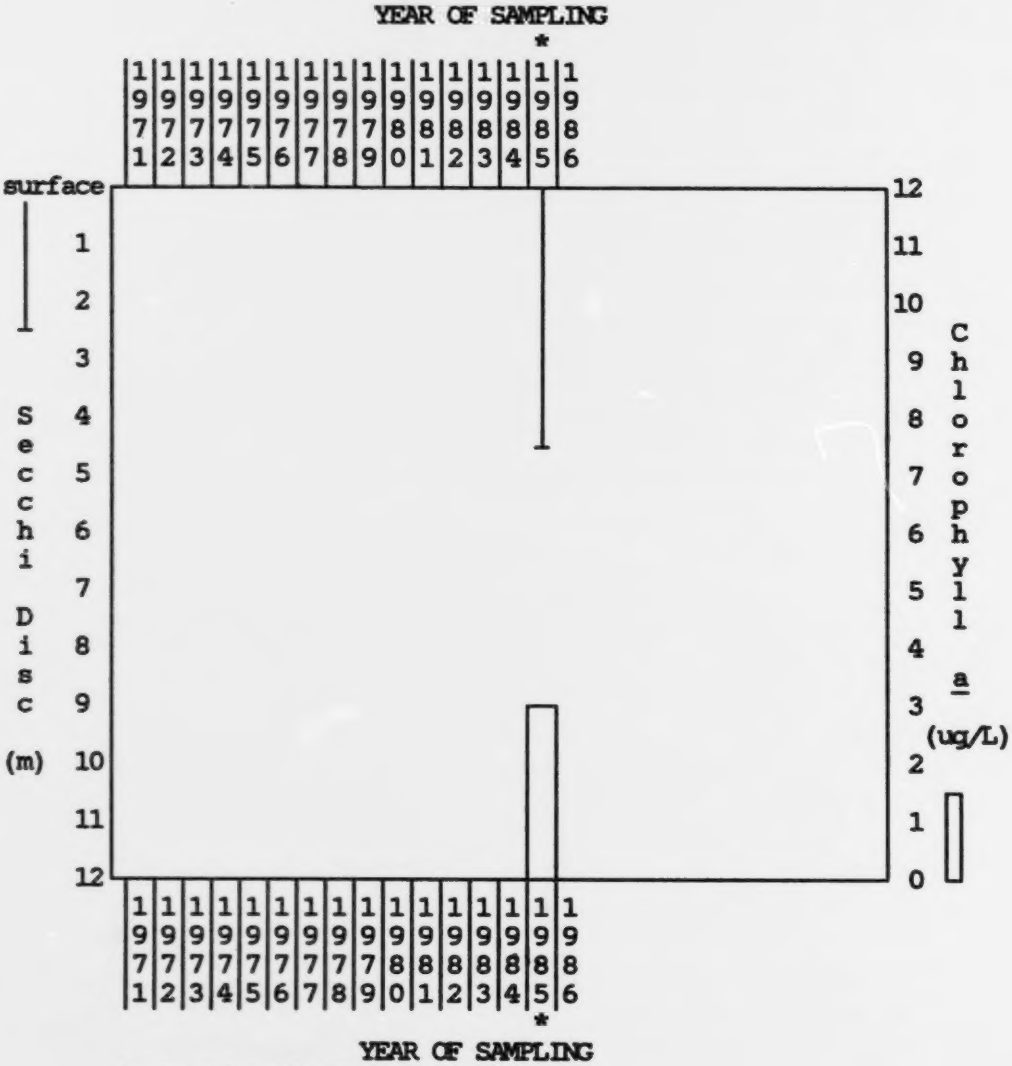
We hope that sampling continues in 1986 in order to establish a good long-term record of water quality at this location.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Balsam Lake (South End) from 1977 to 1983. A minimum of 4 results were required for graphing.



The 3 years of available reliable seasonal average data for the South Bay of Balsam Lake indicate that the degree of water clarity continues to be moderate to low. Densities of suspended algae have been moderately low also.
We hope that sampling continues in 1986 on Balsam Lake with increased sampling frequency in order to establish a reliable long-term record of water quality at this location.

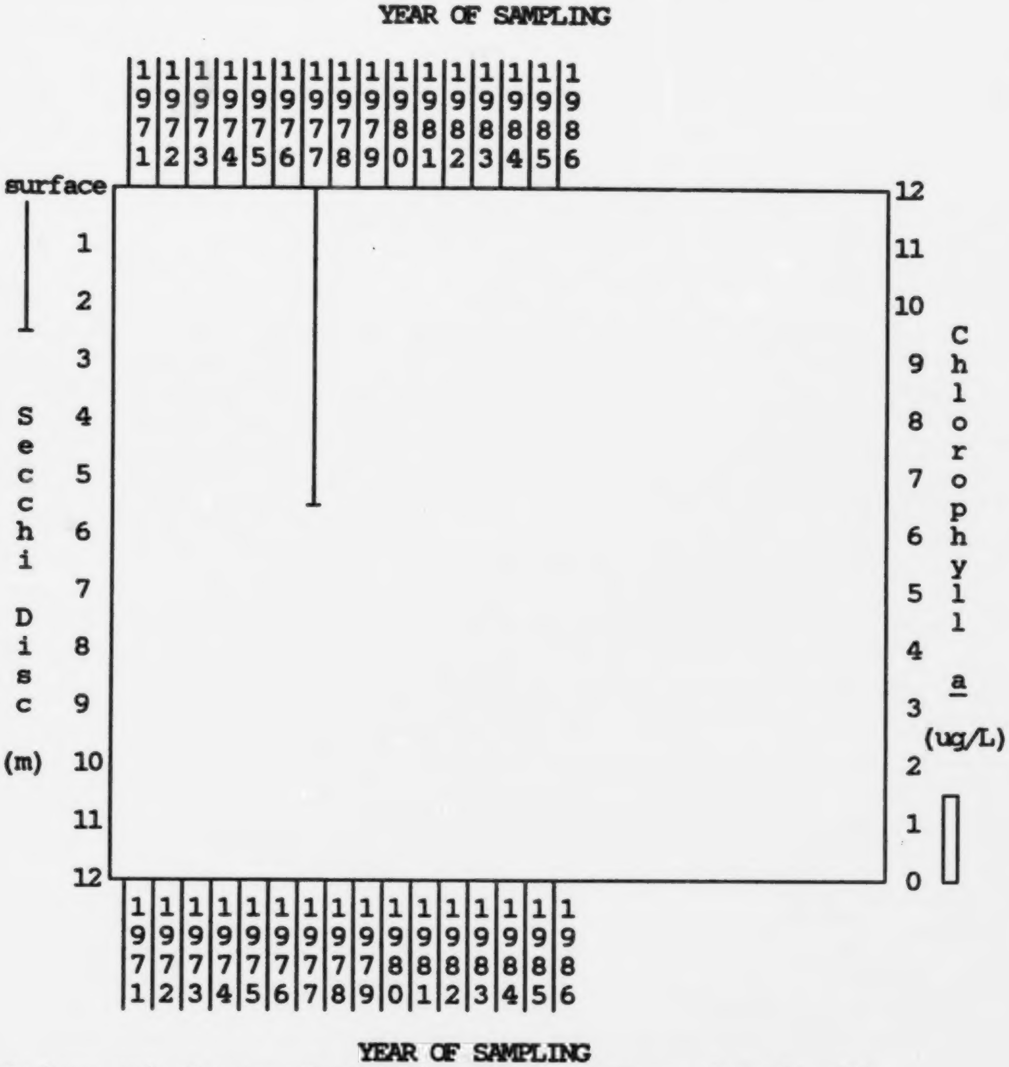
Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Balsam Lake (Grand Island) from 1985. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results were required for graphing.



* based on 5 results

We have only 1 year of data for the Grand Island station of Balsam Lake so we cannot yet make any comments concerning long-term water quality trends. We hope that sampling continues in 1986 at this location in order to establish a good historical record of water quality.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Balsam Lake (West Bay) from 1977. A minimum of 4 results were required for graphing.



We have only 1 year of reliable seasonal average data for this station so no comments can be made concerning long-term water quality trends.

Bass Lake

Orillia & Oro Townships

Simcoe County

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Bass Lake in 1985

Station	Main	
Date	S.D.	Chl.a
May 22	3.0	LA
June 26	2.0	8.8
Aug 5	2.0	2.0
Aug 14	2.0	7.6
Sept 4	2.3	6.3
Sept 18	2.3	8.3
Oct 7	2.5	4.1
	2.3	6.2

A good sampling program was done on Bass Lake in 1985 with sampling done on 7 occasions. Secchi disc readings indicated a low degree of water clarity, ranging from 2.0 to 3.0 m and averaging 2.3 m. Chlorophyll a concentrations were variable ranging from 2.0 to 8.8 ug/L and averaging 6.2 ug/L, indicating high densities of suspended algae.

The 1985 results indicate that Bass Lake is enriched with periodically high densities of suspended algae and low water clarity.

If sampling is done in 1986 please be sure to enter the lake name on all of the submission forms.

Figure 1: The relationship between Secchi disc and chlorophyll a for Bass Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means.

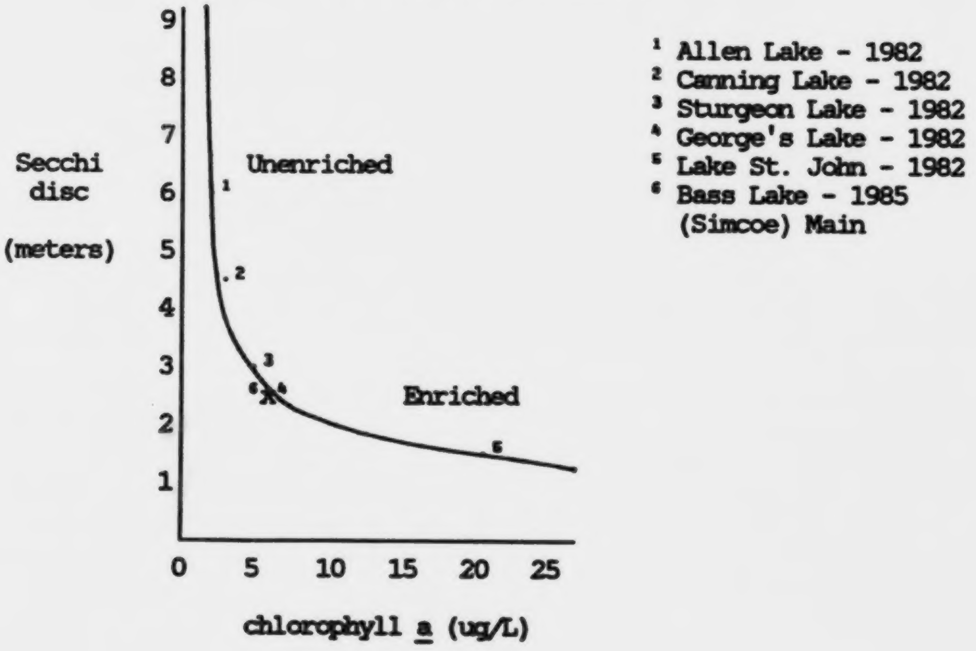
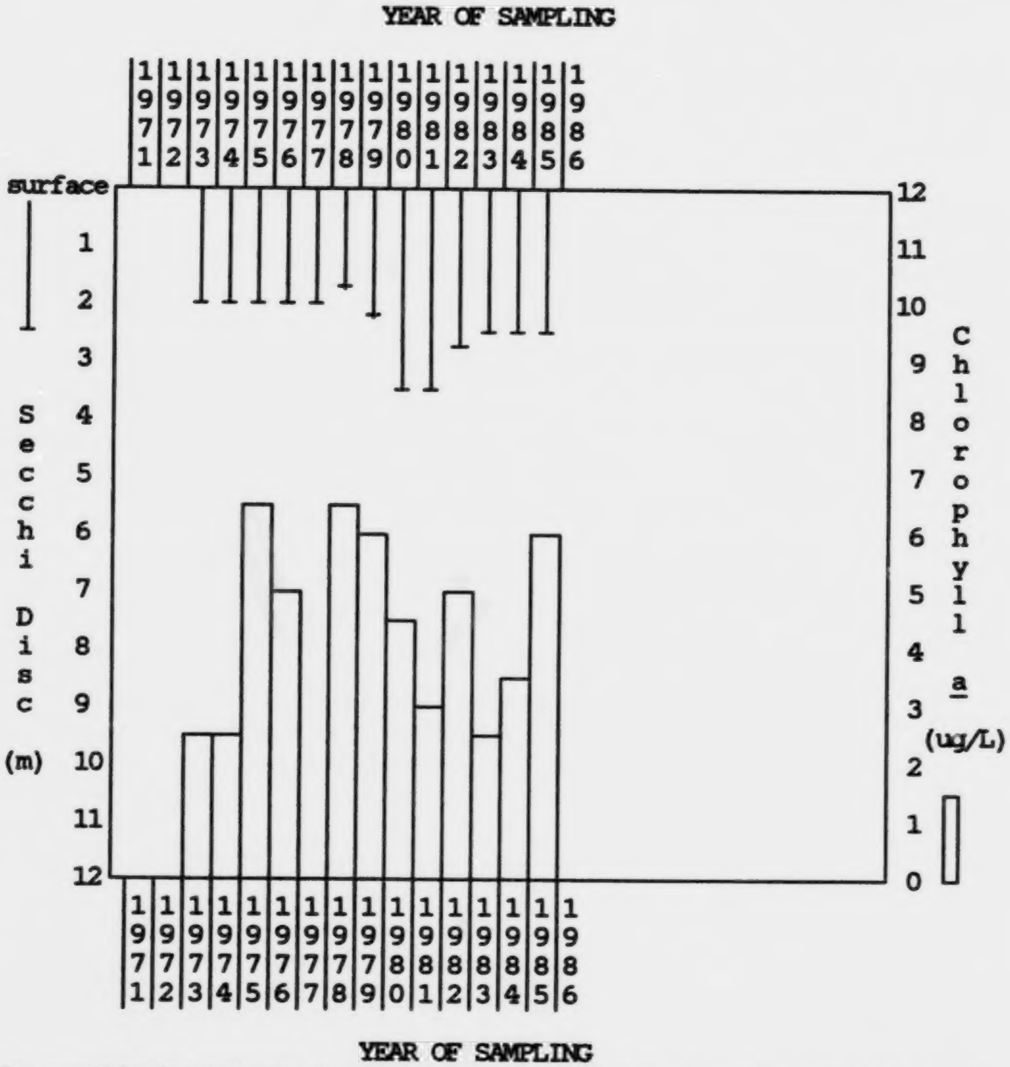


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Bass Lake in Simcoe from 1973 to 1985. Seasonal mean data (more than 6 sampling dates) only.



An excellent historical record of water quality has been established for Bass Lake in Simcoe County with 13 years of reliable data. The degree of water clarity has been low for most of this period except 1980 and 1981 when the clarity was moderately low. Densities of suspended algae have been variable ranging from moderately low to high depending on the year. This is indicative of enriched water quality conditions. There has been no noticeable trend to indicate a change in water quality in Bass Lake. We hope that sampling continues in 1986. Keep up the excellent work.

Bat Lake

Minden Township

County of Haliburton

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Bat Lake in 1985

Station	Centre	
Date	S.D.	Chl.a
June 8	2.3	9.5
June 15	2.75	17.3
June 23	2.5	6.2
July 28	3.25	8.5
Aug 4	2.75	4.5
Aug 10	3.25	5.2
Aug 17	3.0	UR
Sept 2	2.5	5.8
	-----	-----
	2.8	8.1
	-----	-----

UR - unreliable sample result

In 1985, a good sampling program was conducted on Bat Lake with 8 sampling occasions.

The degree of water transparency in Bat Lake was moderately low with Secchi disc readings ranging from 2.3 m to 3.25 m.

The chlorophyll a concentrations in 1985 were considerably lower than in 1984, averaging 8.1 ug/L indicating that the bloom of 1984 did not recur except for a short period in mid-June.

Water quality of Bat Lake in 1985 was typical of enriched lake conditions with low clarity and high densities of suspended algae.

Figure 1: The relationship between Secchi disc and chlorophyll a for Bat Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means.

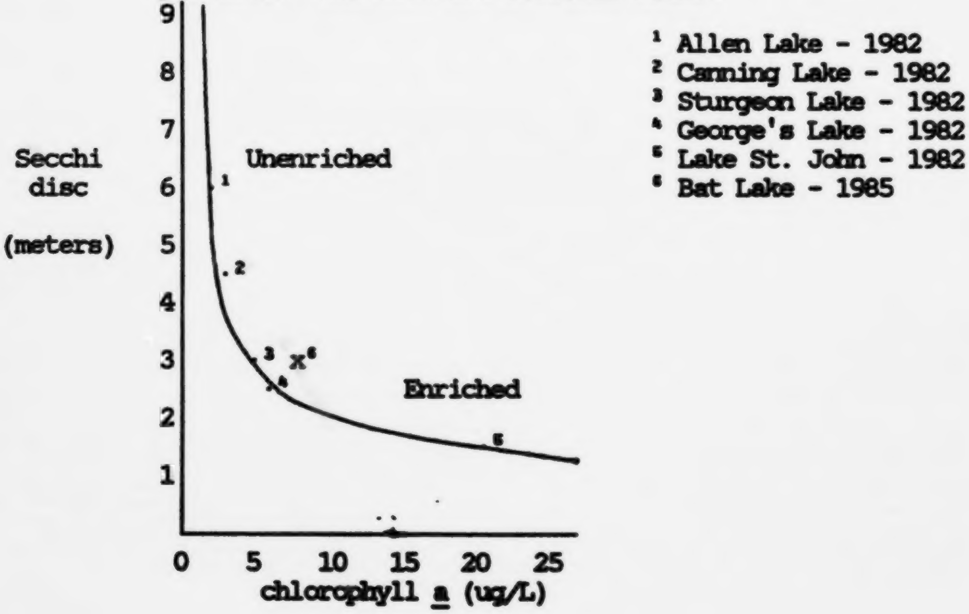
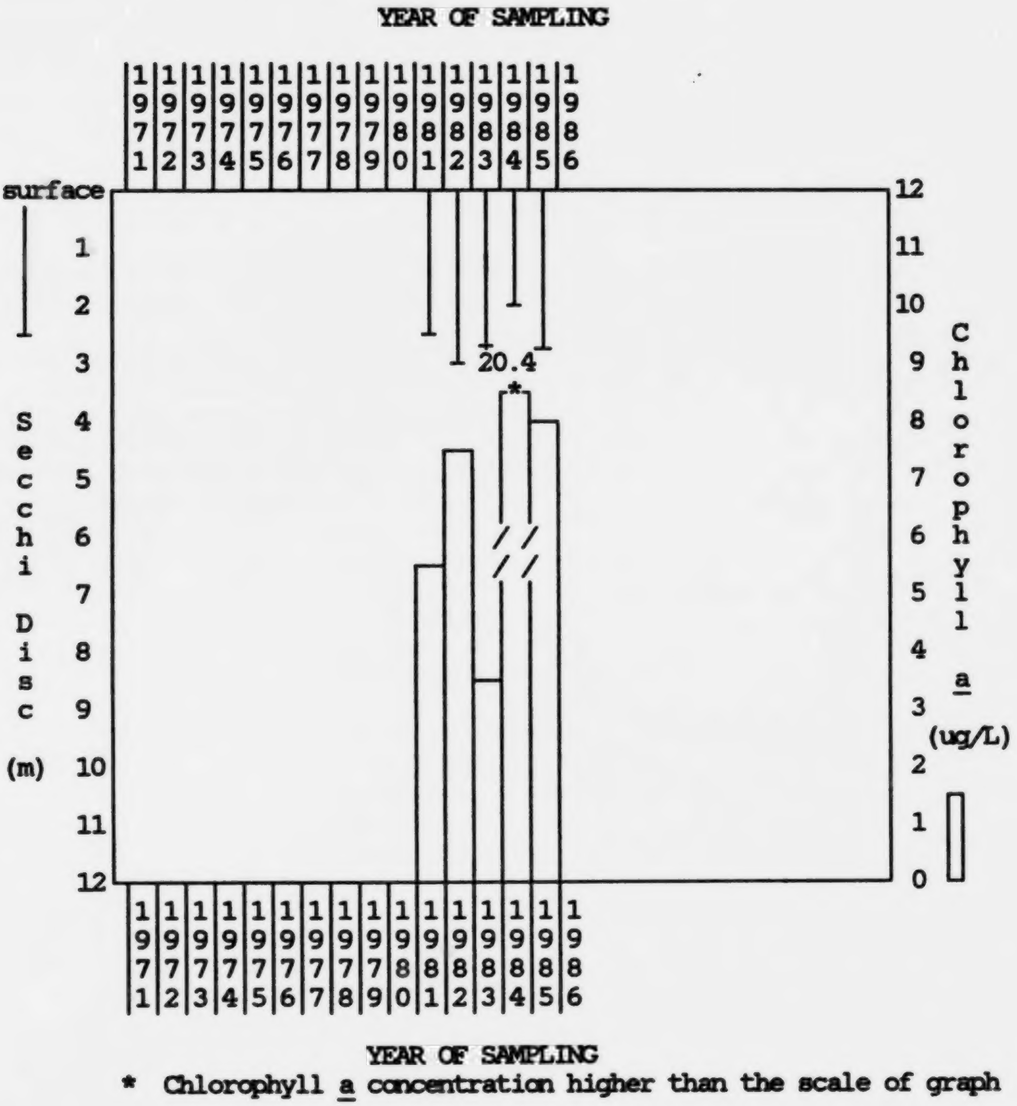


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Bat Lake from 1981 to 1985. Seasonal mean data (more than 6 sampling dates) only.



* Chlorophyll a concentration higher than the scale of graph

We now have 5 years of reliable seasonal information available for Bat Lake which indicate no overall change in the enrichment status. The degree of water transparency has been consistently low in the 2 to 3 m range. Densities of suspended algae have been highly variable as is often the case in enriched lakes with no limitation in nutrients. The extremely high densities of algae which occurred in 1984 did not recur in 1985 perhaps due to less than ideal weather conditions. Bat Lake water quality reflects enriched conditions with low water clarity and periodically high densities of suspended algae.

Beech Lake

Stanhope Township

County of Haliburton

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Beech Lake in 1985

Station 1

Date	S.D.	Chl.a
July 21	5.25	2.6
Aug 11	4.6	2.7
Sept 2	4.75	2.1
	-----	-----

Insufficient sampling was done in 1985 to obtain meaningful results from the information collected. On the 3 occasions when sampling was done, the degree of water transparency was moderately high with Secchi disc readings ranging from 4.6 m to 5.25 m.
The chlorophyll a concentrations were moderately low ranging from 2.1 ug/L to 2.6 ug/L indicating low densities of suspended algae.

Figure 1: The relationship between Secchi disc and chlorophyll a for and a number of recreational lakes in the province. All data are seasonal means.

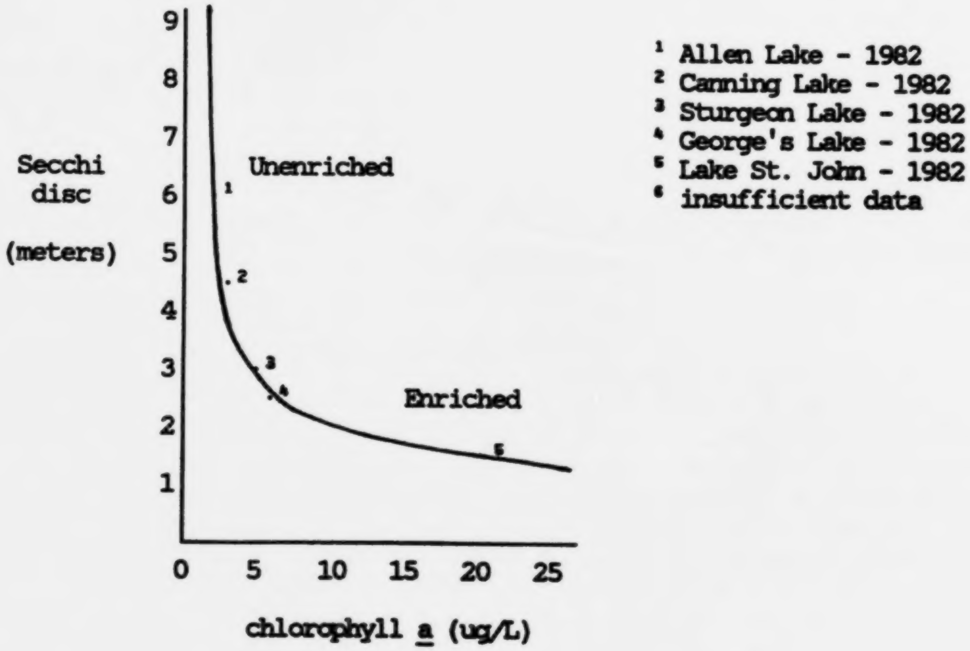
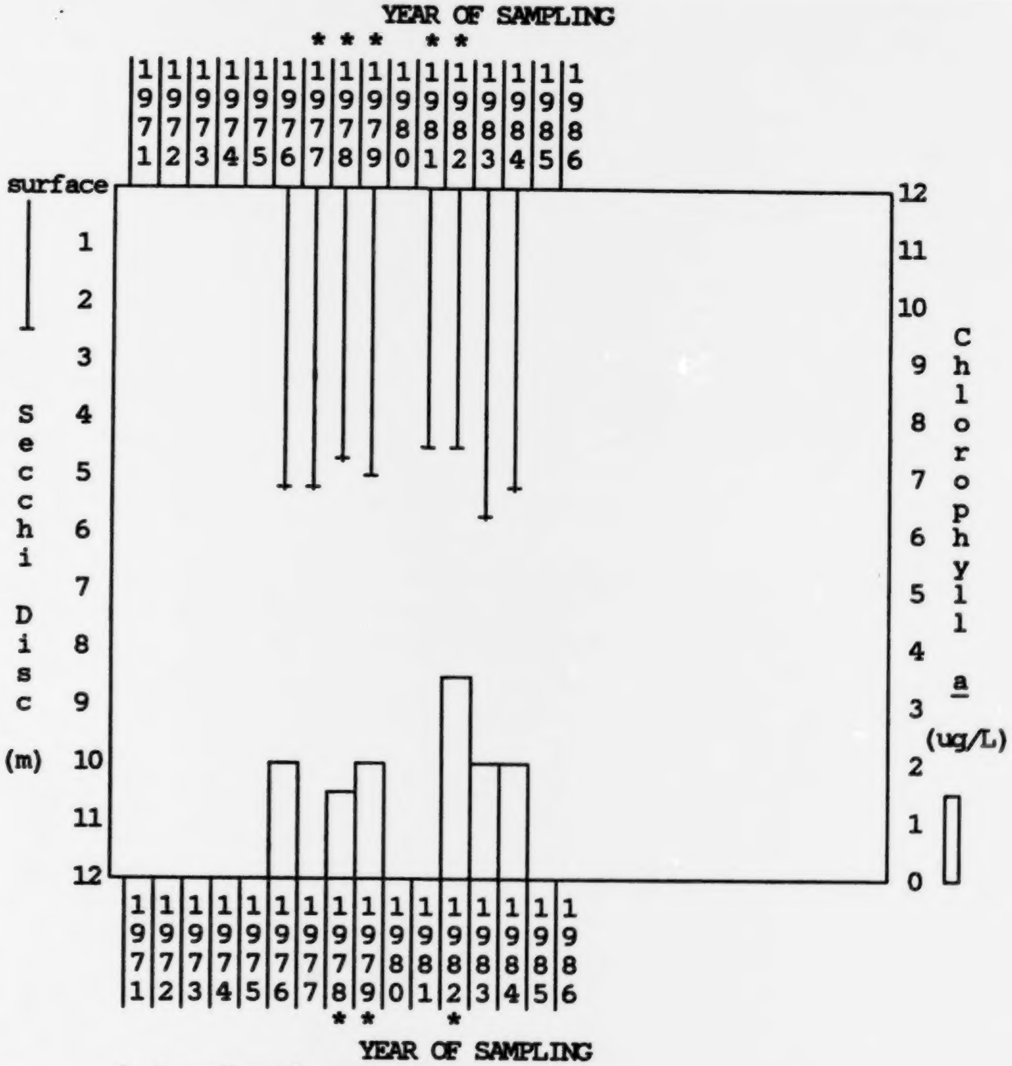


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Beech Lake from 1976 to 1985. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 sample results was required for graphing.



* based on 4 or 5 sample results

There are now 6 years of data available for Beech Lake. These results indicate that there has been no overall change in water quality since 1976. Secchi disc readings have ranged from 4.5 to 6 m and chlorophyll a concentrations have usually been less than 2 ug/L except in 1983 when concentrations were 3.6 ug/L.

The water quality of Beech Lake continues to be very good with conditions which usually reflect unenriched conditions.

Bella lake

Sinclair Township
Township of Lake of Bays

District Municipality of
Muskoka

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Bella Lake in 1985

Station	Centre	
Date	S.D.	Chl.a
Aug 5	7.5	1.2
	-----	-----

Bella Lake was sampled on only 1 occasion in 1985, therefore, no meaningful results were obtained.

Figure 1: The relationship between Secchi disc and chlorophyll a for and a number of recreational lakes in the province. All data are seasonal means.

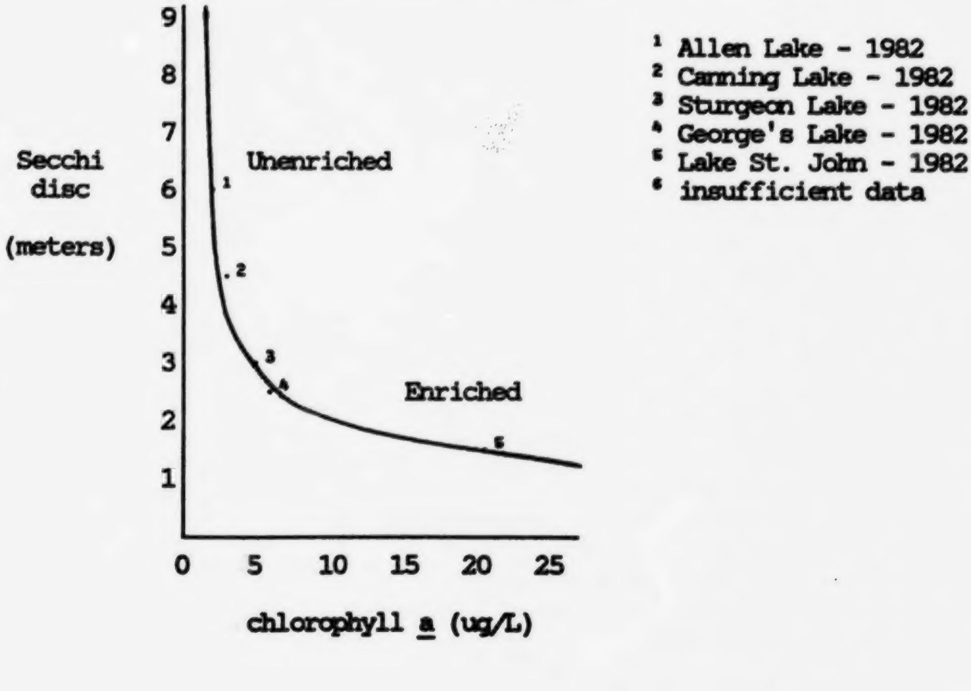
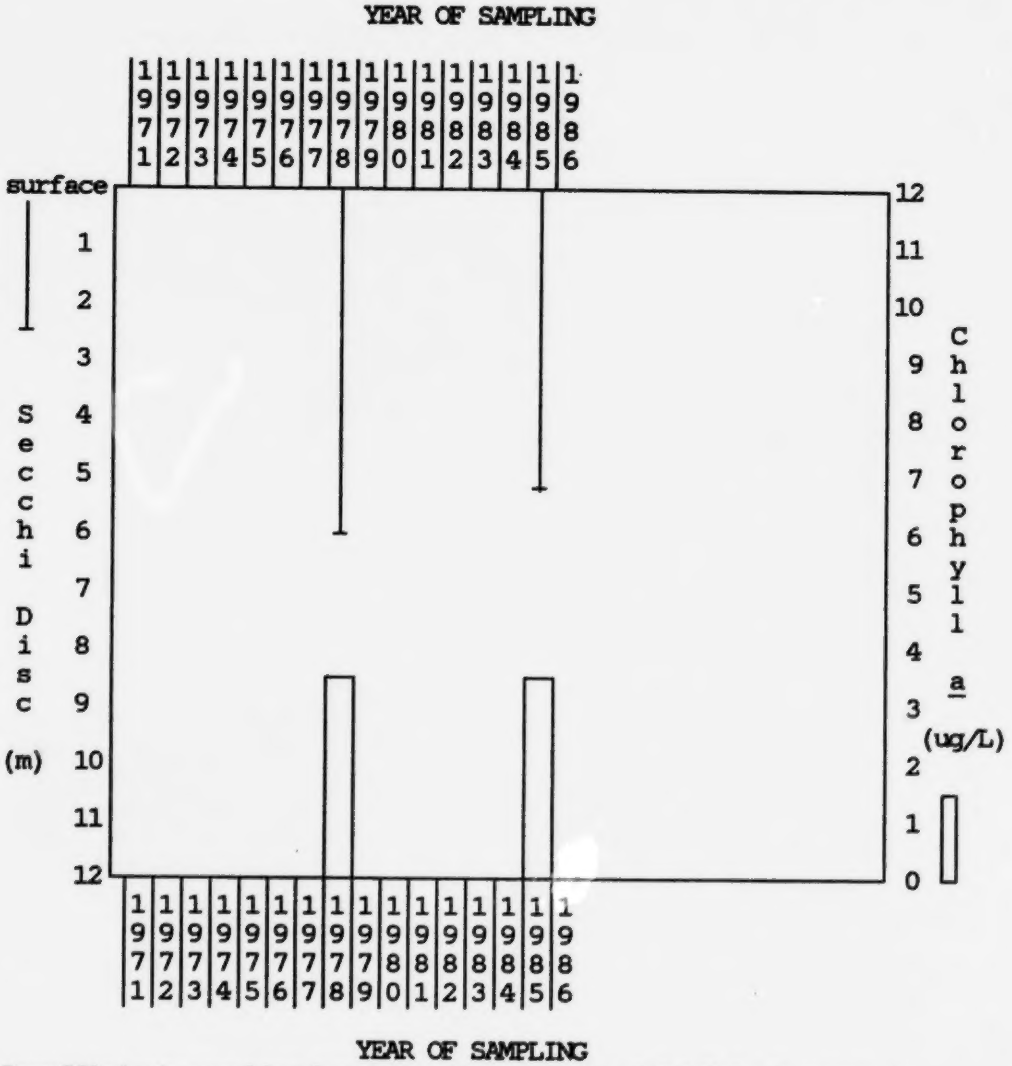


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Bella Lake from 1978 to 1985 (MOE data). A minimum of 4 results was required for graphing.



Insufficient sampling has been done for the Self Help Program to include the information on Figure 2, however, MOE has sampled Bella Lake in 1978 and 1985 and these results have been graphed.

There is no major difference between the 1978 and the 1985 results, with a high degree of water transparency observed in both years and moderate densities of suspended algae.

Water quality of Bella Lake continues to be good with higher densities of suspended algae than are usually found in an unenriched lake.

Belmont Lake

Belmont & Methuen Twp.

Peterborough County

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Belmont Lake in 1985

Station	Near Entrance To Crowe River	
Date	S.D.	Chl.a
June 11	4.0	L0.8
June 17	3.5	1.4
June 25	3.25	1.5
July 29	4.75	1.1
Aug 11	3.5	U R
Aug 18	3.0	1.5
Aug 26	4.0	3.3
	-----	-----
	3.7	L1.6

L - less than
U R - unreliable result

In 1985, Belmont Lake was sampled on 7 occasions from June 11 to Aug. 26. Secchi disc readings ranged from 3.0 m to 4.75 m and averaged 3.7 m indicating a moderate degree of water clarity. Chlorophyll a concentrations were low, ranging from less than 0.8 ug/L to 3.3 ug/L and averaging less than 1.6 ug/L. Based on the chlorophyll results, Belmont Lake would be considered unenriched, however the degree of water clarity was more typical of a moderately enriched lake. The lower water clarity may be partly due to the moderate natural colouration of the water in this lake.

Figure 1: The relationship between Secchi disc and chlorophyll a for Belmont Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means.

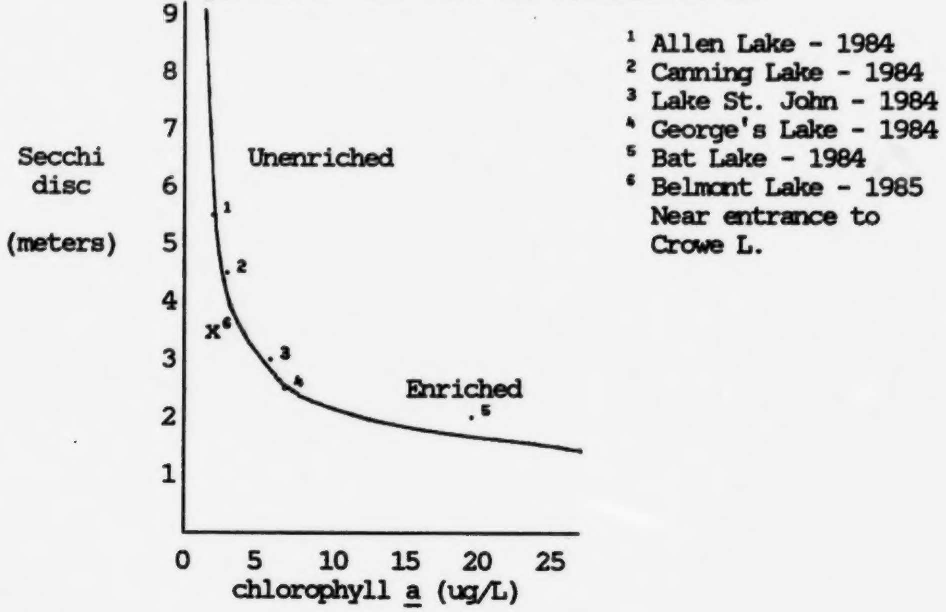
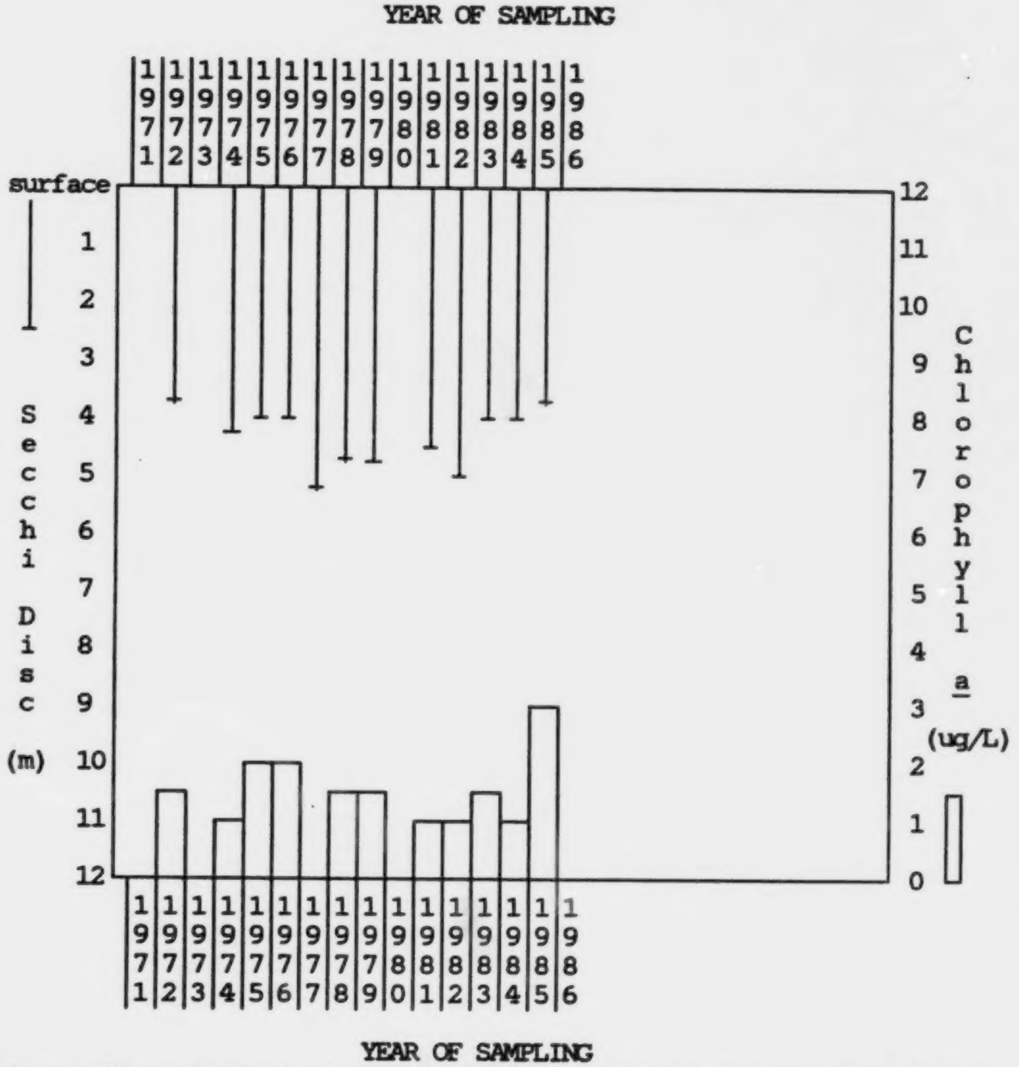


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Belmont Lake from 1972 to 1985. Seasonal mean data (more than 6 sampling dates) only.



An excellent historical record of water quality has been established for Belmont Lake with 12 years of reliable seasonal average data. The degree of water transparency has ranged from moderate to high for the period of record and the densities of suspended algae have generally been low except for 1985 when moderate densities of algae were observed. This would appear to be unusual for Belmont Lake. We recommend that sampling be continued in 1986 to continue to monitor water quality.

Big Barnham Lake

Dudley Township

County of Haliburton

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Big Barnham Lake in 1985

Station	Main	
Date	S.D.	Chl.a
May 20	6.5	1.6
June 2	7.0	LA
Aug 25	6.0	3.0
Sept 2	6.5	1.7
Sept 8	6.5	1.9
	6.5	2.1

LA - lab accident

Big Barnham Lake was sampled on 5 occasions in 1985.
The degree of water transparency was high with Secchi disc readings ranging from 6.0 to 7.0 m and averaging 6.5 m.
The chlorophyll a concentrations were moderately low ranging from 1.6 to 3.0 ug/L and averaging 2.1 ug/L.
Water quality in Big Barnham Lake was good in 1985, indicative of a lake borderline between unenriched and moderately enriched.

Figure 1: The relationship between Secchi disc and chlorophyll a for Big Barnham Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means except for Big Barnham Lake.

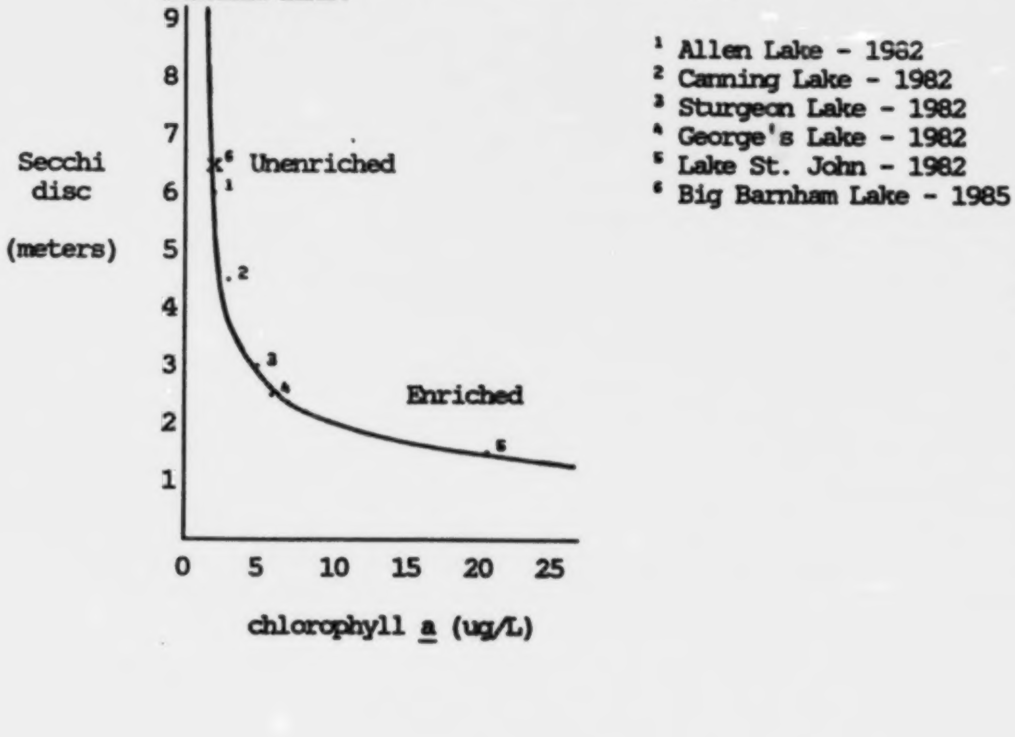
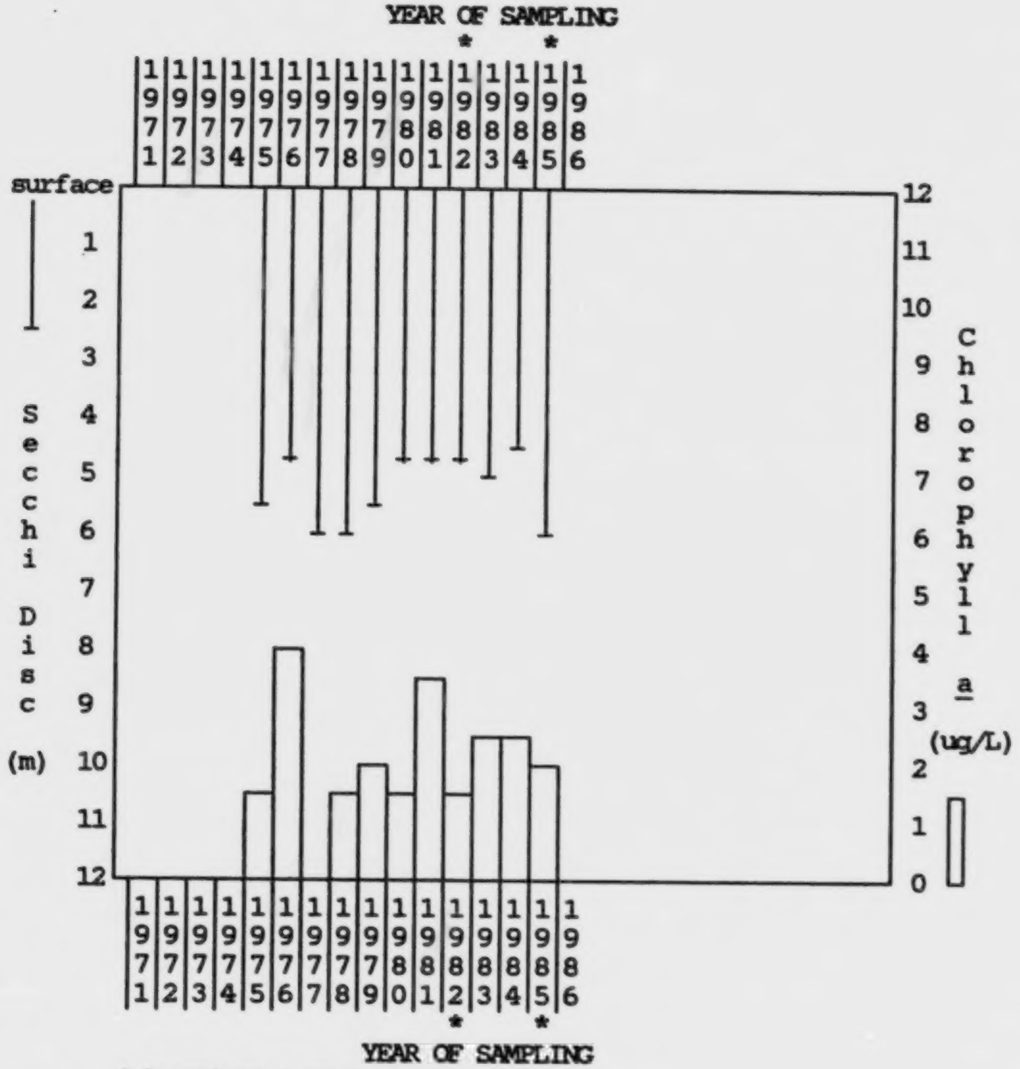


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Big Barnham Lake from 1975 to 1984. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* based on 4 or 5 sample results.

We now have 9 years of data available for Big Barnham Lake. These results indicate no overall changes in water quality.

Secchi disc readings fluctuated around 5 m with the highest degree of water clarity observed in 1977 and 1978. Densities of suspended algae have ranged from 1.5 to 4.0 ug/L with the highest densities of algae observed in 1976 and 1981.

Water quality of Big Barnham Lake continues to be indicative of moderately enriched conditions with a moderately high degree of water transparency and low to moderate densities of suspended algae.

Big Straggle Lake

Harcourt Township

County of Haliburton

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Big Straggle Lake in 1985

Station	Main	
Date	S.D.	Chl.a
May 20	4.5	1.5
June 16	5.0	2.5
June 23	5.0	2.4
July 1	5.0	2.1
July 28	4.5	1.9
Aug 11	5.0	2.3
Aug 25	5.0	2.9
Sept 1	4.75	2.0
	4.8	2.2

An excellent sampling program was conducted on Big Straggle Lake in 1985 with 8 sampling occasions. The degree of water transparency was moderately high, with Secchi disc readings ranging from 4.5 to 5.0 m and averaging 4.8 m. The densities of suspended algae were moderately low with chlorophyll a concentrations ranging from 1.5 to 2.9 ug/L and averaging 2.2 ug/L. Water quality of Big Straggle Lake continues to be good typical of a lake borderline between moderately enriched and unenriched.

Figure 1: The relationship between Secchi disc and chlorophyll a for Big Straggle Lake in 1985 and a number of recreational lakes in the province.

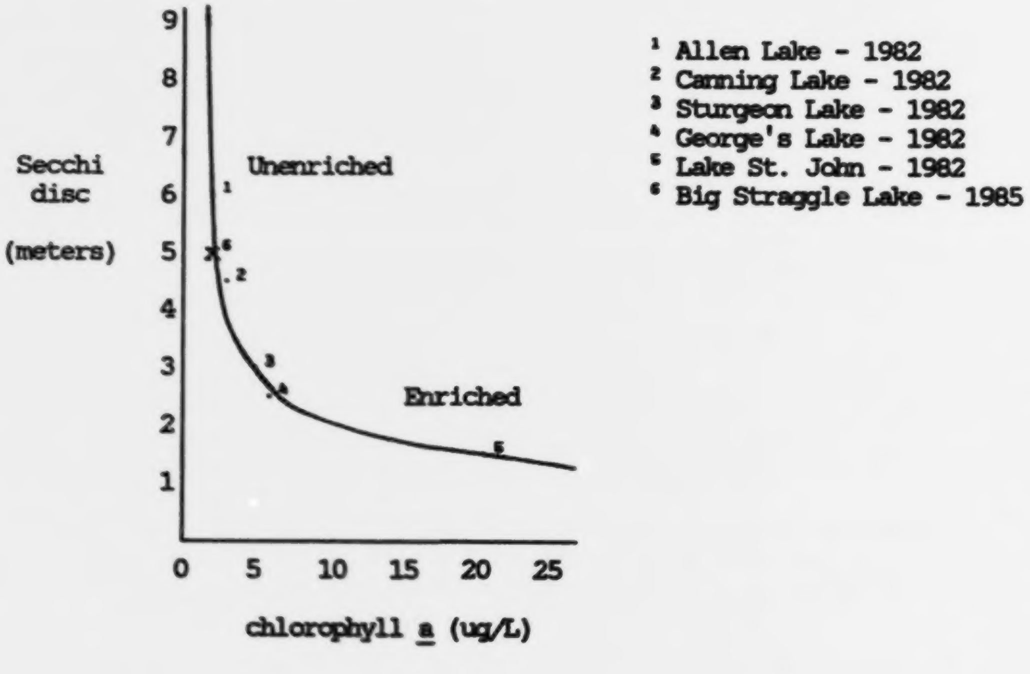
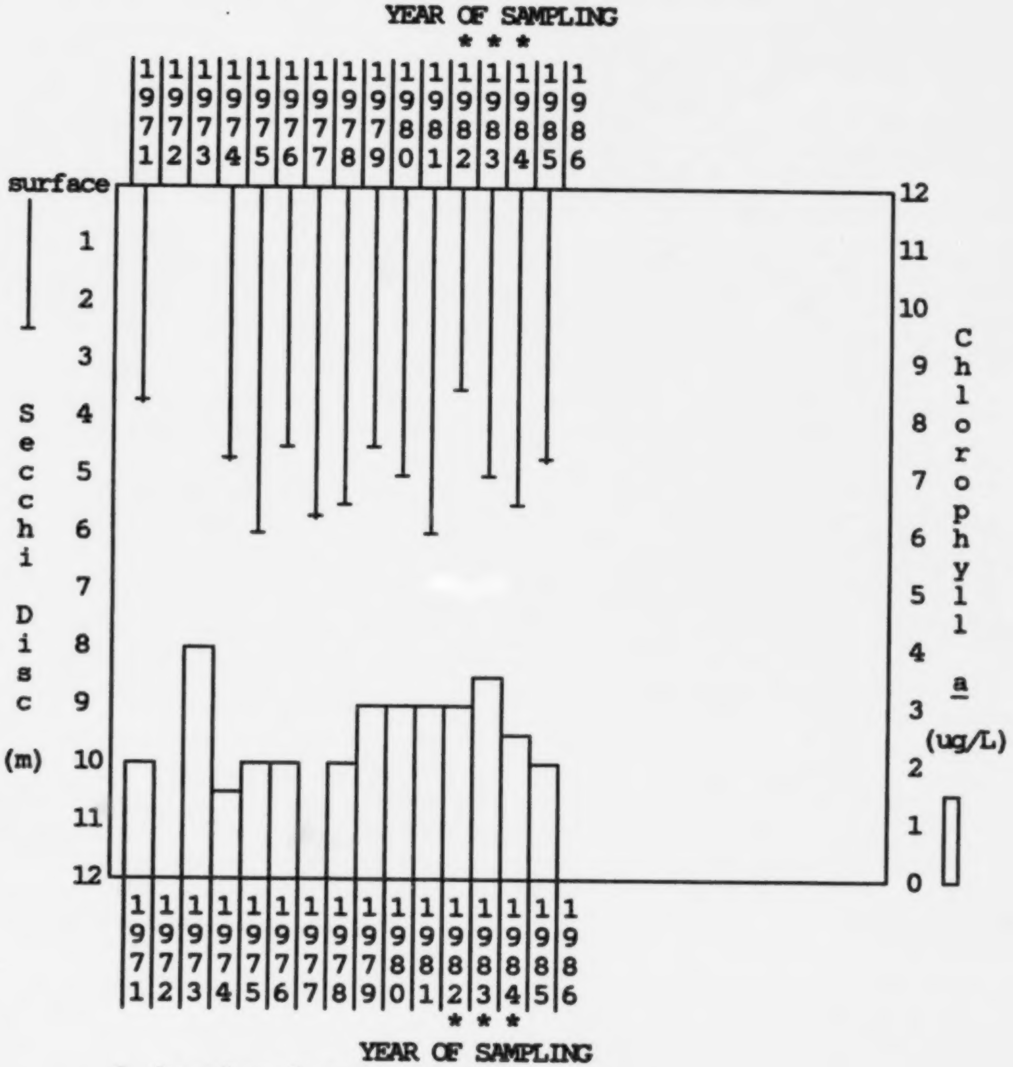


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Big Straggle Lake from 1971 to 1985. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 sample results was required for graphing.



* based on 4 sample results

We now have 13 years of reliable data for Big Straggle Lake. These results indicate that the lake has a great deal of variation in the degree of water transparency with Secchi disc readings ranging from 3.5 to 6 m. Densities of suspended algae were moderate, ranging from 1.5 to 4.0 ug/L.

There has been no overall change in water quality in Big Straggle Lake since 1971 with the data indicating that the lake is moderately enriched with water transparency which is often higher than normal.

Birch Bark (Trounce) Lake

Galway Township

Peterborough County

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Birch Bark Lake in 1985

Station	1	
Date	S.D.	Chl.a
July 1	5.0	1.9
July 28	4.9	2.5
Aug 11	5.1	2.5
Aug 25	5.0	2.7
Sept 29	5.2	T X
	5.0	2.4

T X - more than 72 hours expired between sampling and analysis

In 1985, Birch Bark Lake was sampled on 5 occasions from July 1 to Sept.29. These results indicated that the lake had a high degree of water clarity with Secchi disc readings ranging from 4.9 to 5.2 m and averaging 5.0 m. Chlorophyll a concentrations were moderately low ranging from 1.9 to 2.7 ug/L and averaging 2.4 ug/L. These results indicate that Birch Bark Lake would be considered borderline between moderately enriched and unenriched.

Figure 1: The relationship between Secchi disc and chlorophyll a for Birch Bark Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means except for Birch Bark Lake.

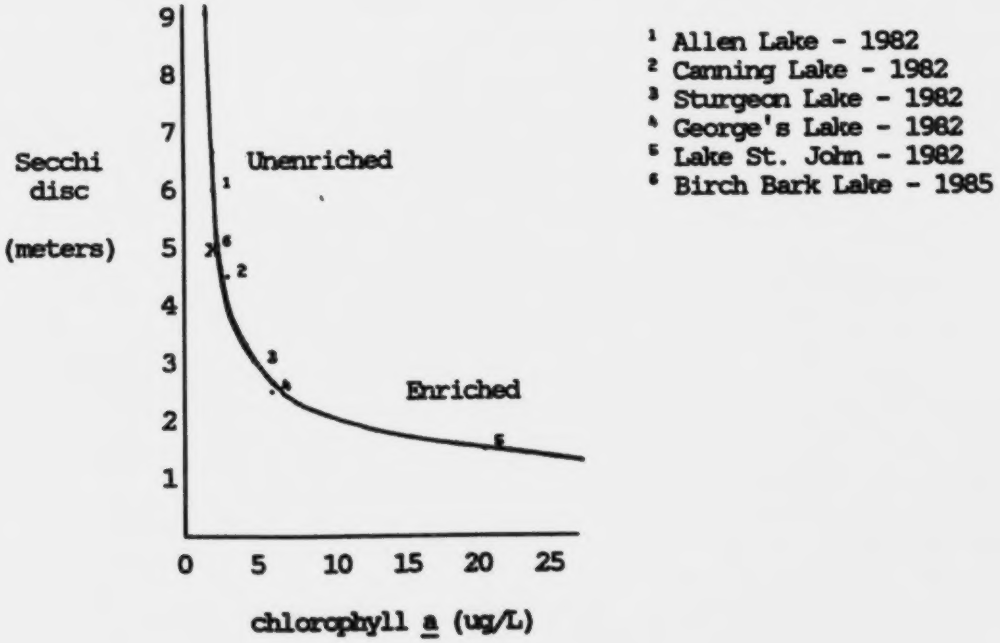
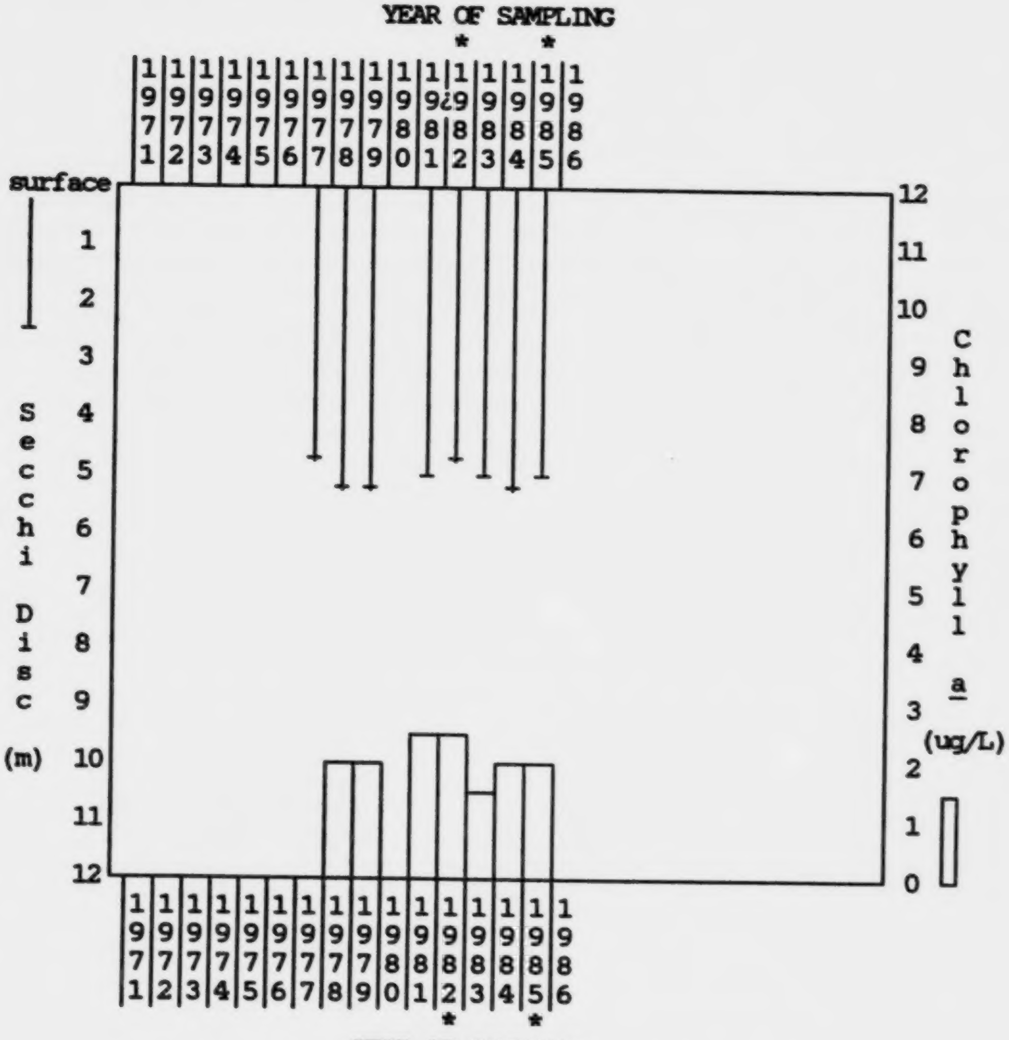


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Birch Bark Lake from 1977 to 1985. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* based on 4 or 5 results

A good record of water quality has been established for Birch Bark Lake with 8 years of data.

The degree of water clarity has been moderately high for the period of record with no apparent changes observed since 1977.

Densities of suspended algae have been low to moderate since 1977 with no apparent trends to indicate a change in water quality.

We hope that sampling continues in 1986 so that a continuous long-term record of water quality for Birch Bark Lake can be maintained.

Black Lake

Wood Ward

District Municipality of Muskoka

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Black Lake in 1985

Station	South		North	
Date	S.D.	Chl.a	S.D.	Chl.a
May 20	1.2	9.5	1.5	3.9
May 26	1.5	2.5	1.3	1.6
June 9	1.5	6.7	1.5	4.3
June 16	1.5	3.9	1.5	4.4
June 23	1.5	4.3	1.5	3.9
July 1	1.5	5.7	1.5	3.4
July 28	1.5	4.4	1.5	4.5
Aug 5	1.5	UR	1.5	UR
Aug 11	1.5	7.4	1.5	8.3
Aug 18	1.5	8.7	1.5	5.4
Aug 25	1.5	9.9	1.5	10.5
Sept 2	1.5	6.3	1.5	5.5
	-----	-----	-----	-----
	1.5	6.3	1.5	5.1

UR - unreliable sample result

An excellent sampling program was conducted on Black Lake in 1985, with 12 sampling occasions.

The Secchi disc readings at the South station ranged from 1.2 to 1.5 m and averaged 1.5 m. At the North station, Secchi disc readings ranged from 1.3 to 1.5 m and averaged 1.5 m. These results indicate a low degree of water clarity.

Chlorophyll a concentrations ranged from 2.5 to 9.9 ug/L at the South station and averaged 6.3 ug/L.

At the North station, chlorophyll a concentrations ranged from 1.6 to 10.5 ug/L and averaged 5.1 ug/L. These results indicated that high densities of suspended algae were present.

Black Lake would be considered an enriched lake.

Figure 1: The relationship between Secchi disc and chlorophyll a for Black Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means.

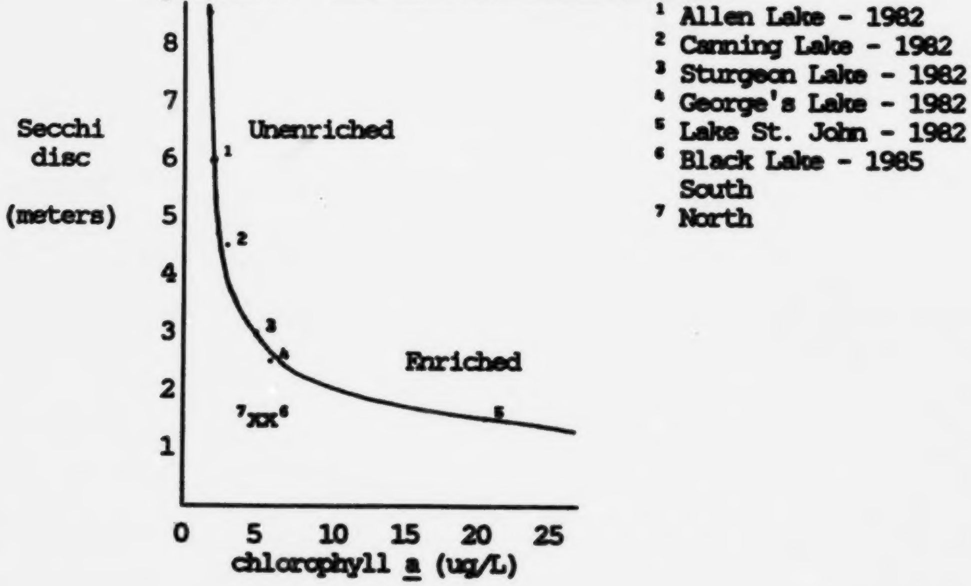
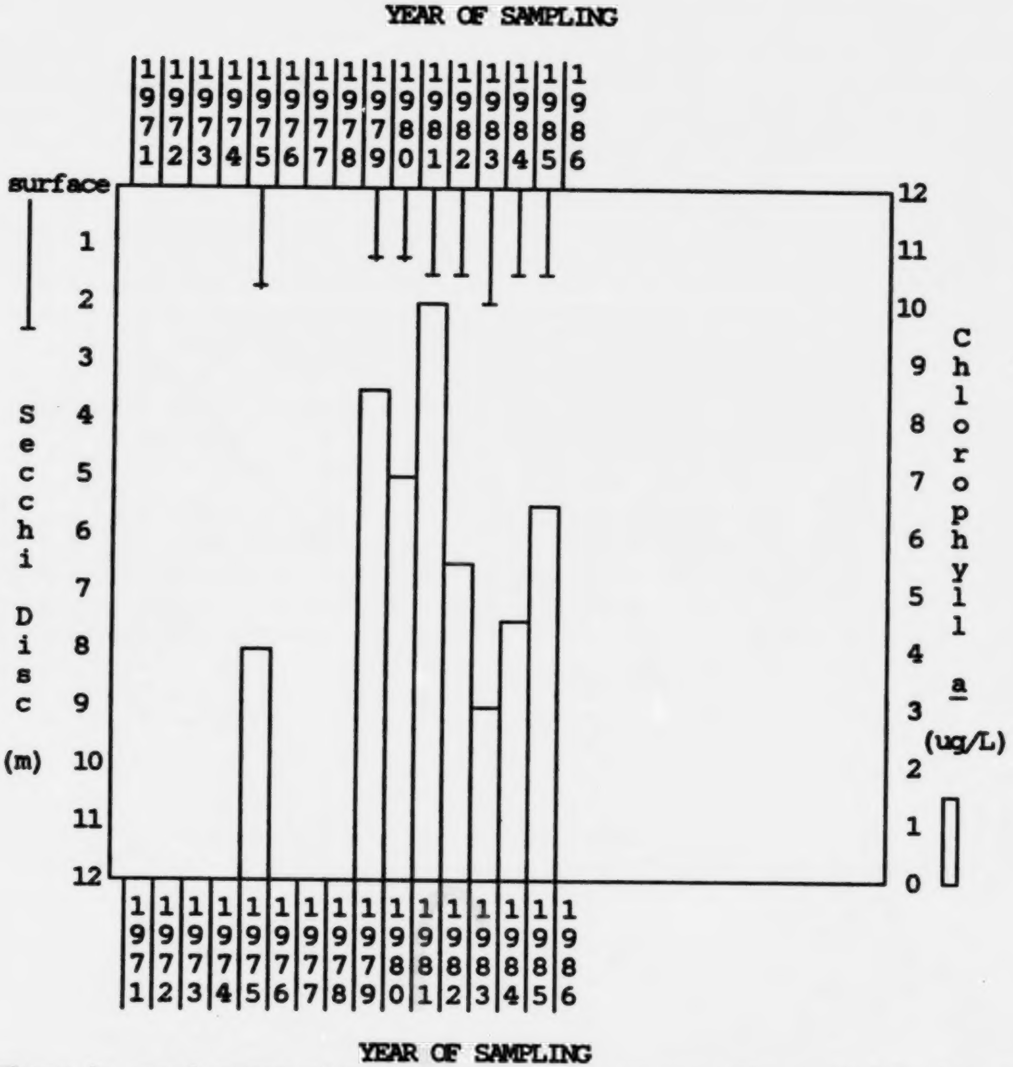


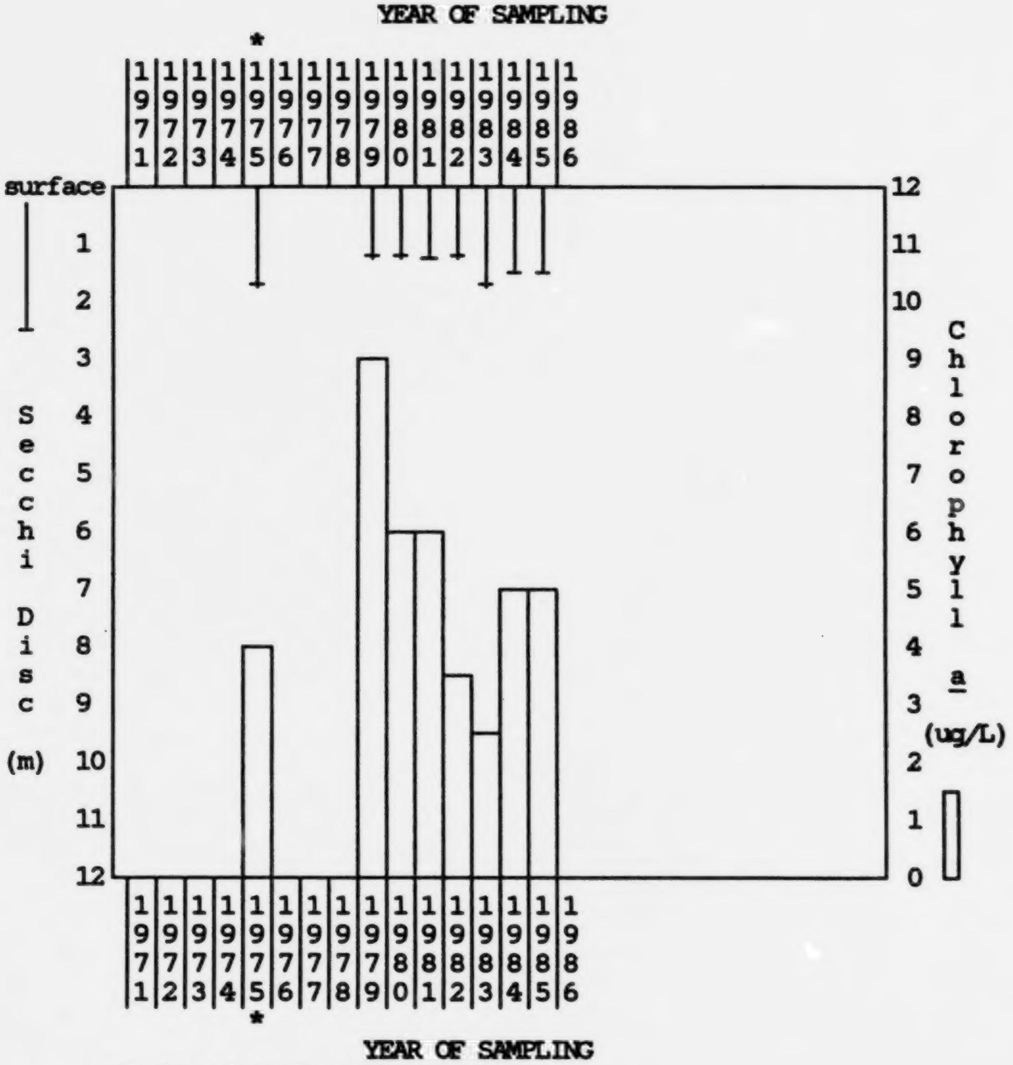
Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Black Lake (South station) from 1975 to 1985. Seasonal mean data (more than 6 sampling dates) only.



There is now 8 years of reliable seasonal average data available for the South station of Black Lake. These results indicate a consistently low degree of water transparency in the range of 1.5 to 2.0 m. The densities of suspended algae were highly variable ranging from 3 to 10 ug/L.

Water quality of Black Lake continues to reflect enriched water quality conditions.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Black Lake (North station) from 1979 to 1985. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 sample results was required for graphing.



* based on 5 sample results

Black Lake North station now has 8 years of water quality data which indicate a consistently low degree of water transparency with Secchi disc readings ranging from 1 to 2 m. The densities of suspended algae were highly variable ranging from 2.5 to 9.0 ug/L.

Water quality at this station was similar to the water quality at the South station, typical of enriched lake conditions.

Bruce Lake

Medora Ward
Township of Muskoka Lakes

District Municipality of Muskoka

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Bruce Lake in 1985.

Station	Centre	
Date	S.D.	Chl.a
May 25	2.5	3.4
June 8	2.5	7.4
June 30	3.0	4.8
Aug 4	4.25	2.1
Aug 17	4.25	5.0
Sept 1	3.0	4.1
Sept 14	3.25	3.7
	3.3	4.4

A very good sampling program was done on Bruce Lake in 1985 with sampling done on 7 occasions.

The Secchi disc readings were moderately low ranging from 2.5 to 4.25 m and averaging 3.3 m, indicating a moderately low degree of water clarity. Chlorophyll a concentrations were high, ranging from 2.1 ug/L to 7.4 ug/L and averaging 4.4 ug/L. These levels indicated that high densities of suspended algae were present but no severe algae blooms were observed in 1985. Water quality of Bruce Lake in 1985 was typical of a lake borderline between moderately enriched and enriched.

Figure 1: Relationship between Secchi disc and chlorophyll a for Bruce Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means.

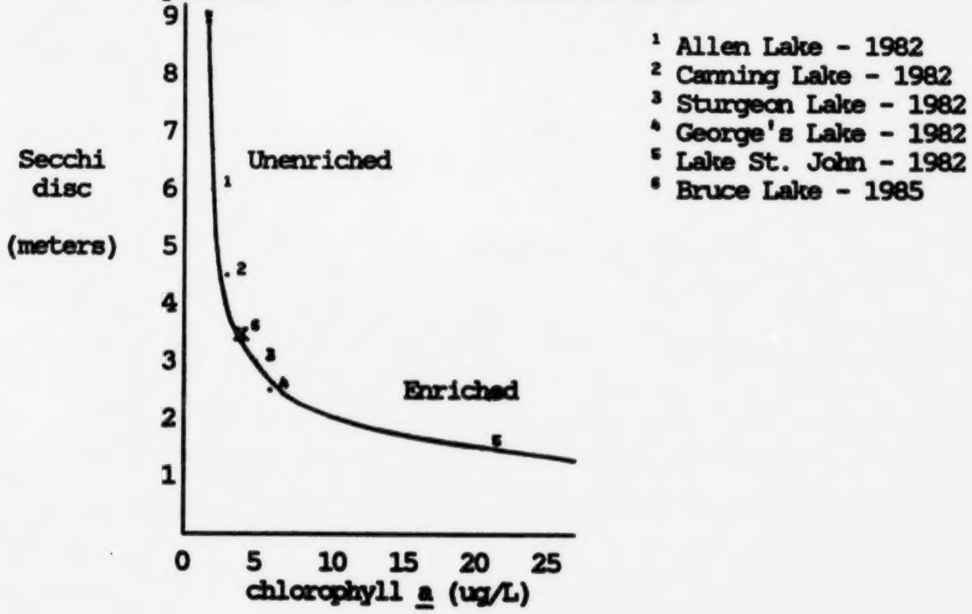
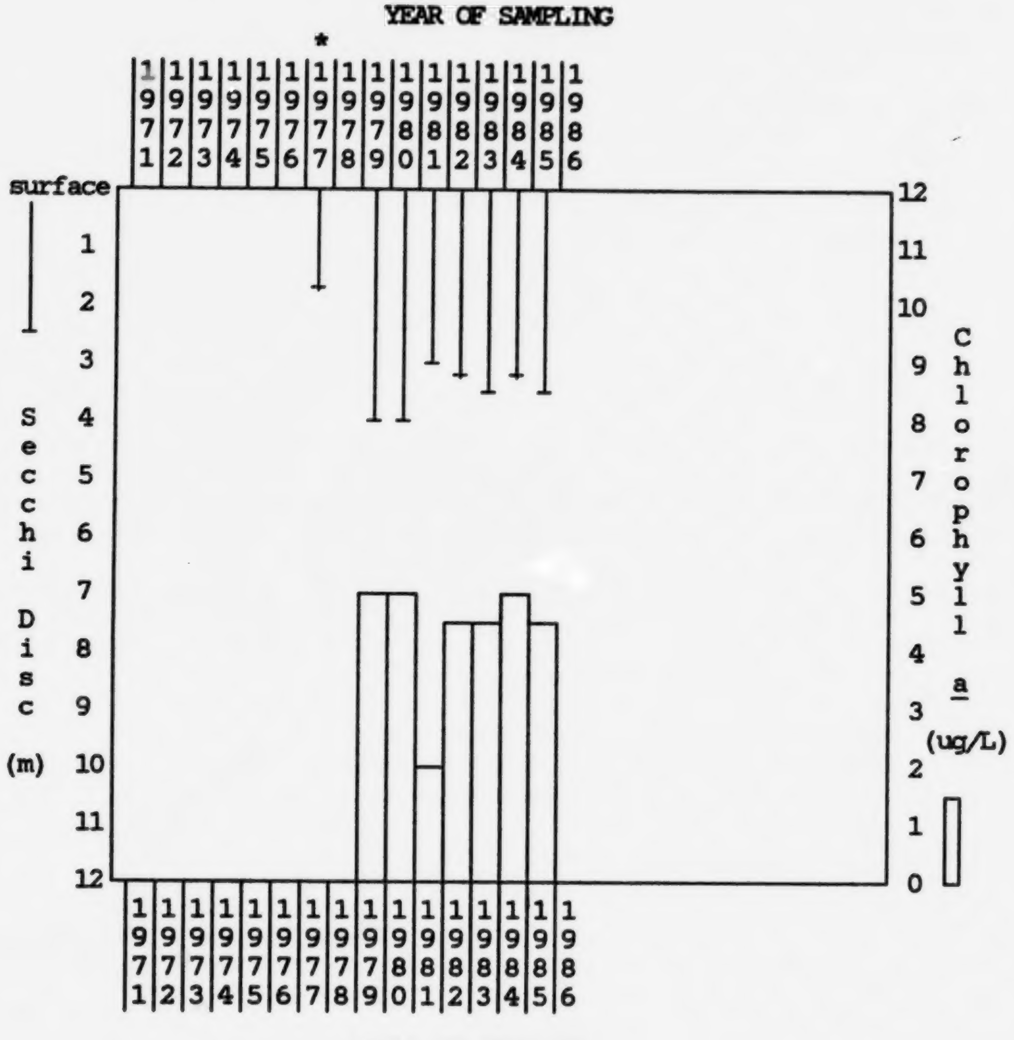


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Bruce Lake from 1979 to 1985. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* based on 5 results

There is now 8 years of data available for Bruce Lake.

These results indicate that there has been no noticeable change in water quality since 1979. In 1977, an unusually low degree of water clarity was observed but Secchi disc readings generally ranged from 3 to 4 m. Densities of suspended algae were usually greater than 4 ug/L except in 1981 when an unusually low chlorophyll a concentration was observed.

Bruce Lake continues to be borderline between moderately enriched and enriched.

Buckskin Lake

Monmouth Township

County of Haliburton

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Buckskin Lake in 1985.

Station	Centre	
Date	S.D.	Chl.a
July 28	4.5	10.7
Aug 4	3.0	UR
Aug 18	3.75	1.4
Aug 25	3.75	6.2
Sept 2	3.5	4.0
Sept 15	3.5	3.2
Oct 7	3.5	7.5
Oct 14	3.5	5.9
	3.6	5.6

UR - unreliable sample result

A very good sampling program was done on Buckskin Lake in 1985 with 8 sampling occasions from July 28 to Oct.14. The Secchi disc readings ranged from 3.0 to 4.5 m and averaged 3.6 m indicating a moderately low degree of water clarity. Chlorophyll a concentrations ranged from low to very high with an average of 5.6 ug/L, indicating that high densities of suspended algae were present particularly in late July and early August. The water quality of Buckskin Lake was typical of enriched conditions with highly variable densities of suspended algae.

Figure 1: The relationship between Secchi disc and chlorophyll a for Buckskin Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means.

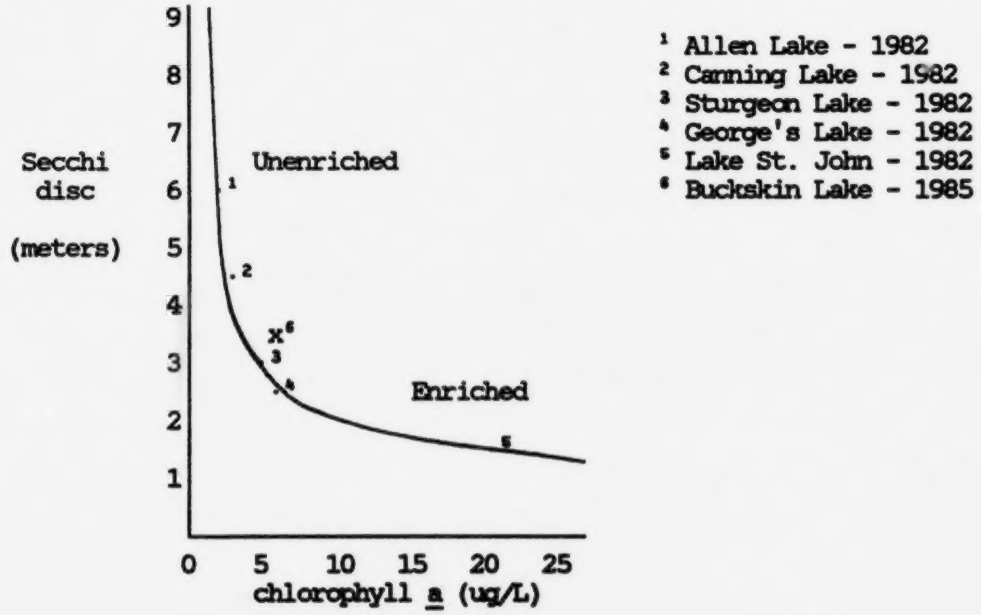
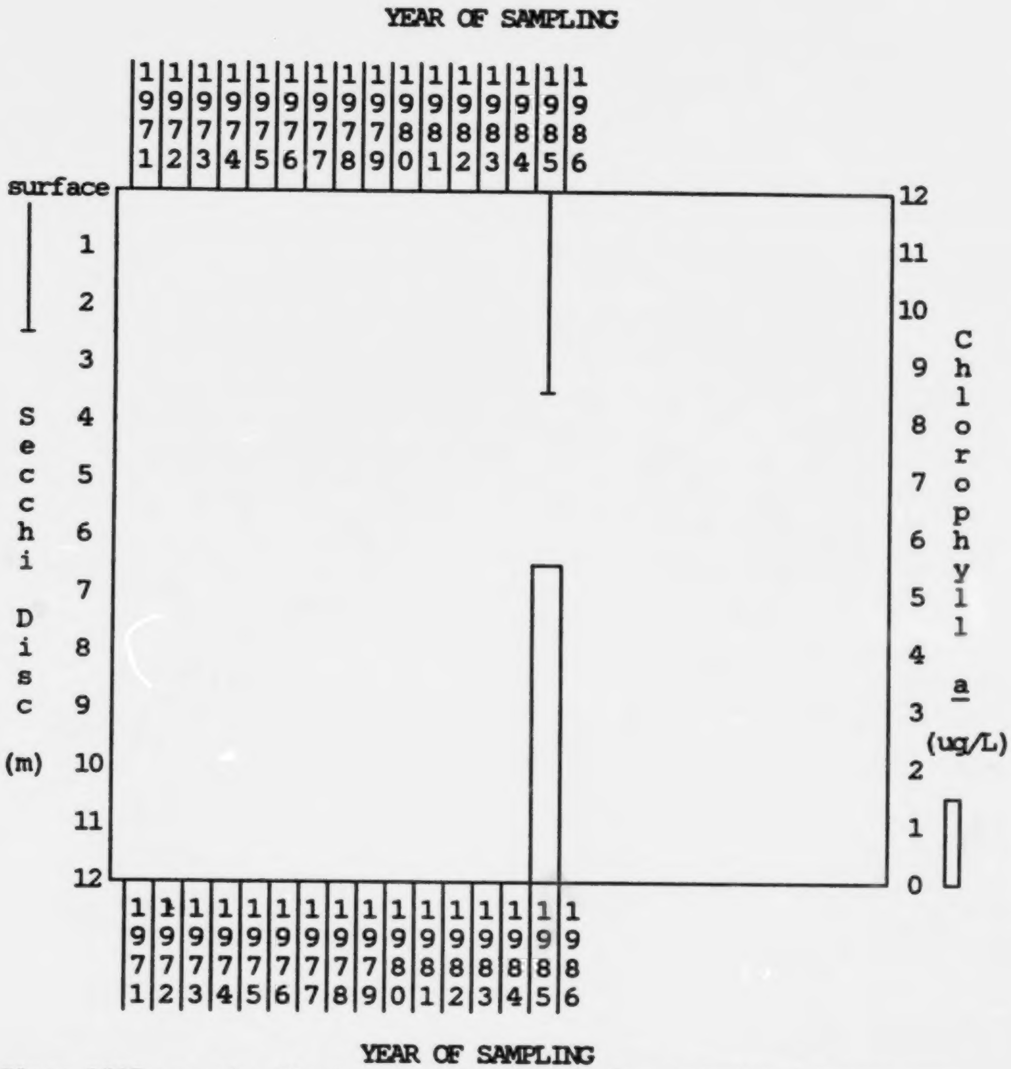


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Buckskin Lake in 1985. Seasonal mean data (more than 6 sampling dates) only.



Since 1985 was the first year of sampling for Buckskin Lake we are unable to comment on the long term water quality trends. We hope that sampling on this lake continues for several years in order to establish a long term record of water quality.

Cameron Lake

Fenelon Township

County of Victoria

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Cameron Lake in 1985

Station	Fells Bay	
Date	S.D.	Chl.a
June 30	3.28	1.7**
Aug 5*	4.46	2.5**
Aug 17	4.18	3.5**
Sept 15*	4.20	2.2**
	-----	-----
	4.0	2.5**
	-----	-----

* sampling dates not given

** chlorophyll samples taken through a depth less than twice Secchi depth

In 1985, sampling was done on 4 occasions from June 30 to Sept.15. Secchi disc readings ranged from 3.28 to 4.46 m and averaged 4.0 m indicating a moderate degree of water clarity. Chlorophyll concentrations ranged from 1.7 to 3.5 ug/L and averaged 2.5 ug/L indicating moderate densities of suspended algae. Based on these results, Cameron Lake would be considered moderately enriched.

If sampling is done in 1986, please be sure to enter the sampling dates on all submission forms.

Figure 1: The relationship between Secchi disc and chlorophyll a for Cameron Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means except for Cameron Lake.

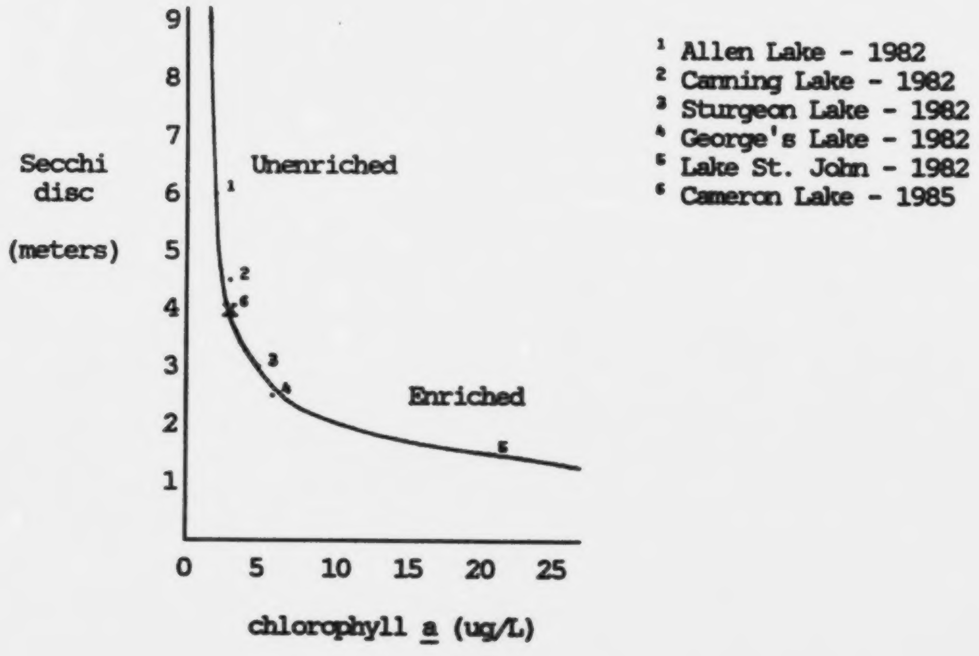
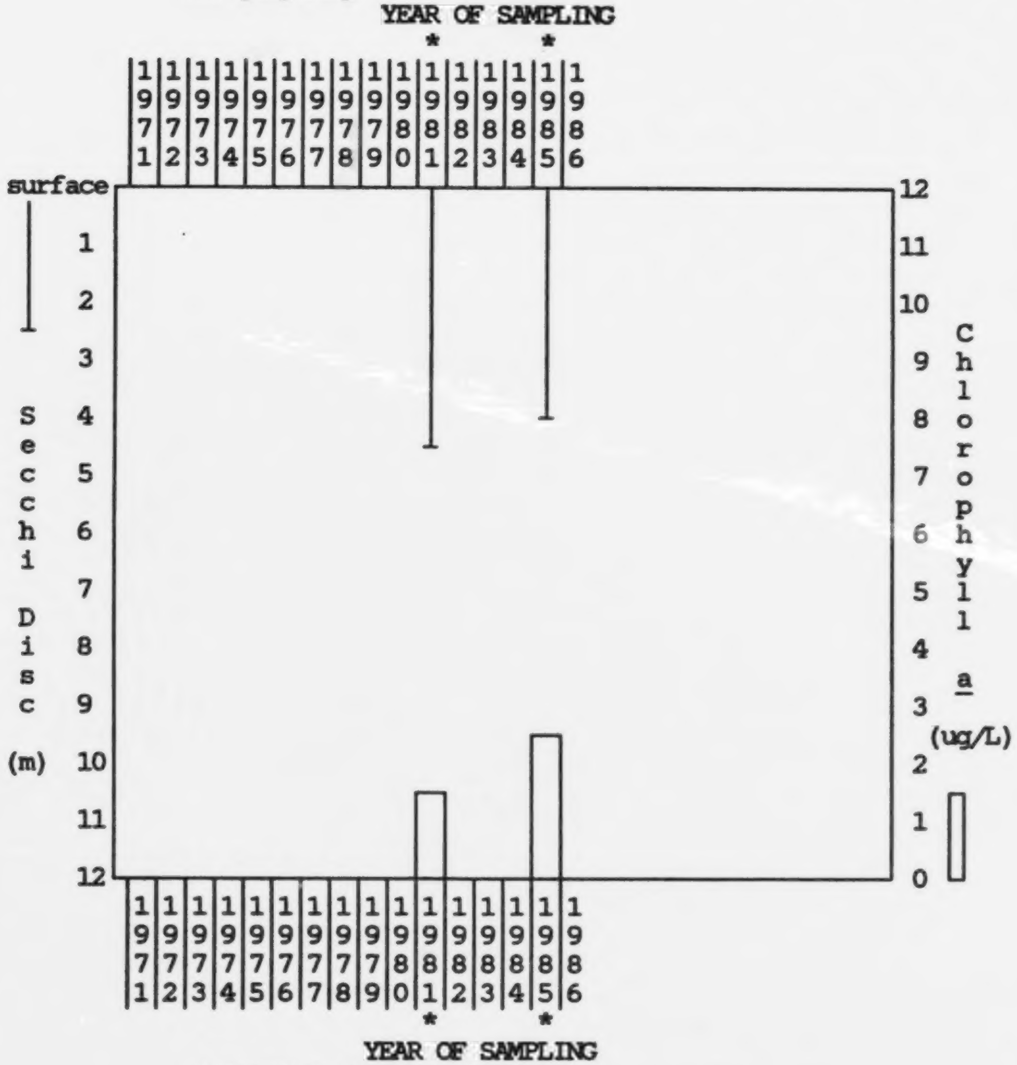


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Cameron Lake (Fell's Bay) from 1981 to 1985. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* Based on 4 or 5 results

We now have 2 years of data for Cameron Lake in Fell's Bay. There is, as yet, insufficient data to comment on any long-term trends in water quality for this location. We hope that sampling continues in 1986 so that a continuous water quality record can be established. The degree of water clarity has been moderately high and densities of suspended algae have been moderately low in Fell's Bay so far.

Canning Lake

Minden & Snowdon Twp

County of Haliburton

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Canning Lake in 1985.

Station	Centre	
Date	S.D.	Chl.a
July 28	4.5	2.8
Aug 11	5.0	2.1
Aug 18	5.0	3.2
Sept 2	4.5	5.4
Oct 14	5.0	2.0
	4.8	3.1

In 1985, Canning Lake was sampled on 5 occasions.
Secchi disc readings ranged from 4.5 to 5.0 m and averaged 4.8 m, indicating a moderately high degree of water transparency.
Chlorophyll a concentrations ranged from 2.0 to 5.4 ug/L and averaged 3.1 ug/L indicating that moderately low densities of suspended algae were present.
Water quality in Canning Lake is typical of moderately enriched conditions.

Figure 1: The relationship between Secchi disc and chlorophyll a for Canning Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means except for Canning Lake.

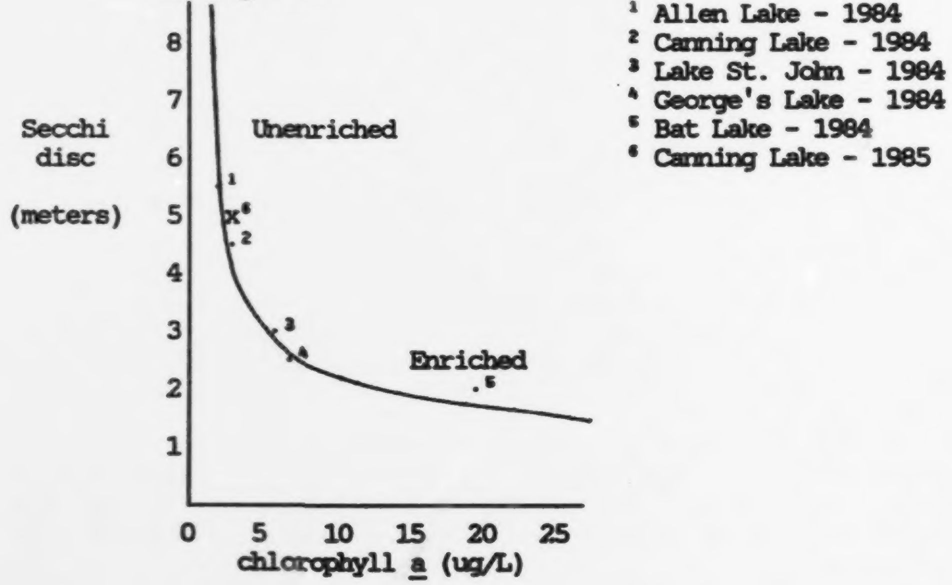
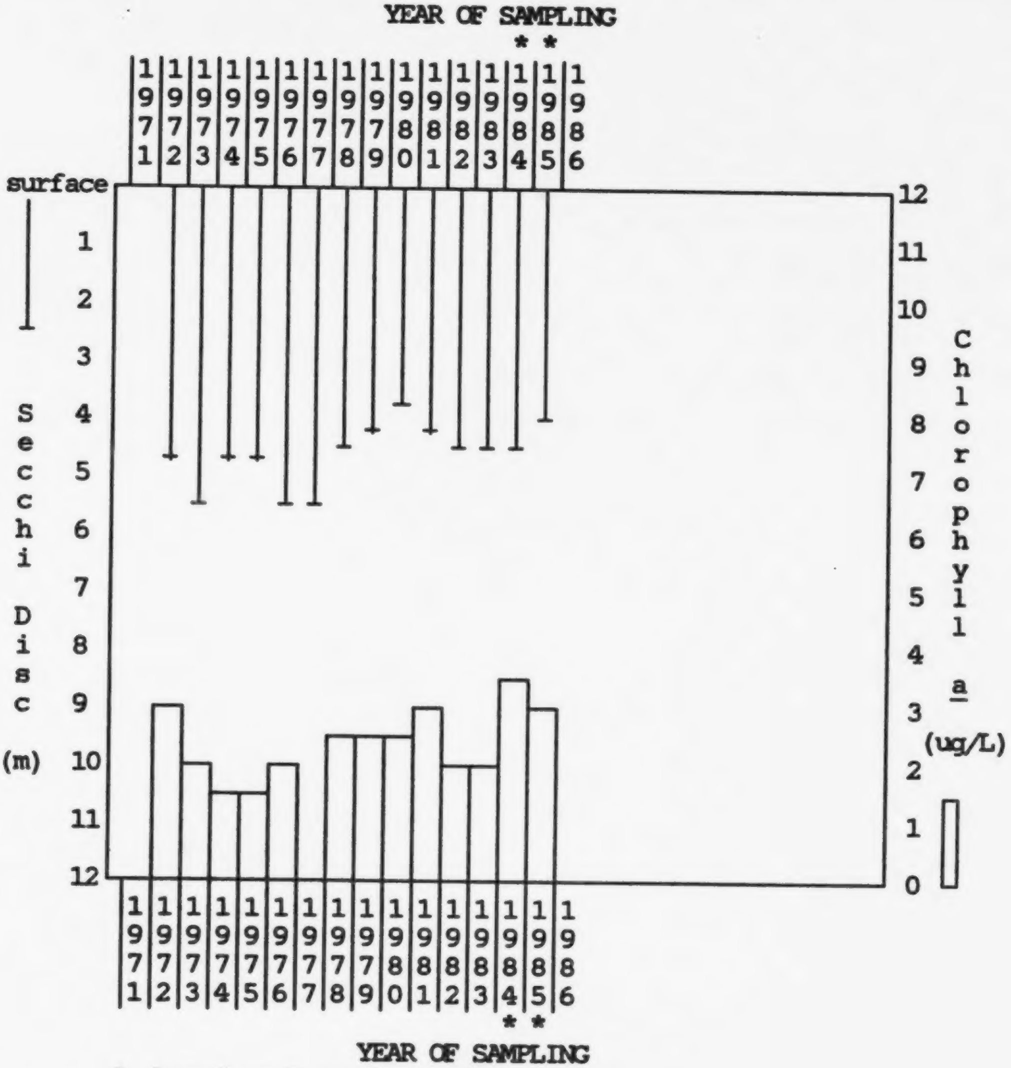


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Canning Lake from 1972 to 1985. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* based on 5 sample results

An excellent long term record of water quality data has been established for Canning Lake with 12 years of reliable seasonal averages. There has been no noticeable change in water quality in Canning Lake since 1972.

The results indicate that Secchi disc readings have generally fluctuated around 4.5 m indicating a moderately high degree of water clarity. Densities of suspended algae have ranged from 1.5 to 3.5 ug/L indicating that moderately low densities of suspended algae were present.

The water quality of Canning Lake continues to be very good, typical of moderately enriched conditions.

Catchacoma Lake

Cavendish Township

County of Peterborough

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Catchacoma Lake in 1985

Station	North		South	
Date	S.D.	Chl.a	S.D.	Chl.a
July 28	5.0	2.6	4.5	U R
Aug 11	4.67	2.7	5.0	2.8
Sept 2	5.0	2.0	5.0	1.9
Sept 15	5.0	1.6	6.0	1.2
	4.9	2.2	5.1	2.0

U R - unreliable result

In 1985, Catchacoma Lake was sampled 4 times from July 28 to Sept.15. Secchi disc readings were similar at both stations averaging 4.9 m at the North station and 5.1 m at the South station indicating a high degree of water clarity.

Chlorophyll a concentrations were moderately low averaging 2.2 ug/L at the North station and 2.0 ug/L at the South station.

Based on these results, Catchacoma Lake would be considered borderline between moderately enriched and unenriched.

Figure 1: The relationship between Secchi disc and chlorophyll a for Catchacoma Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means except Catchacoma Lake.

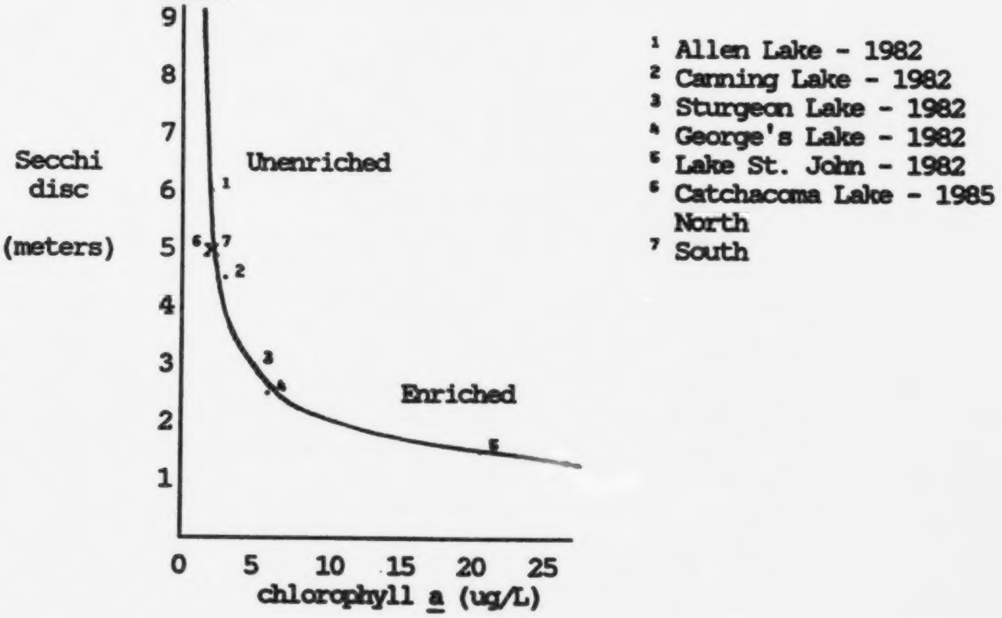
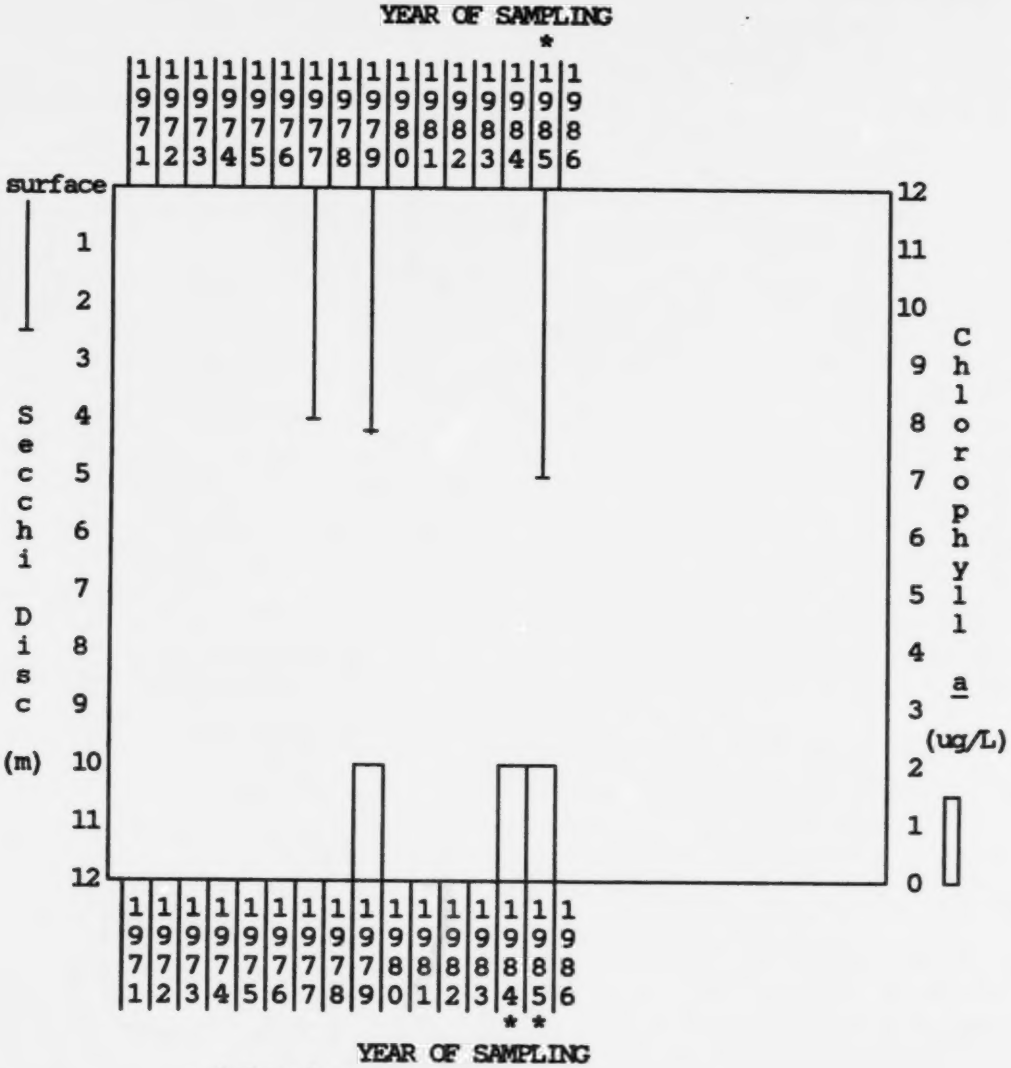


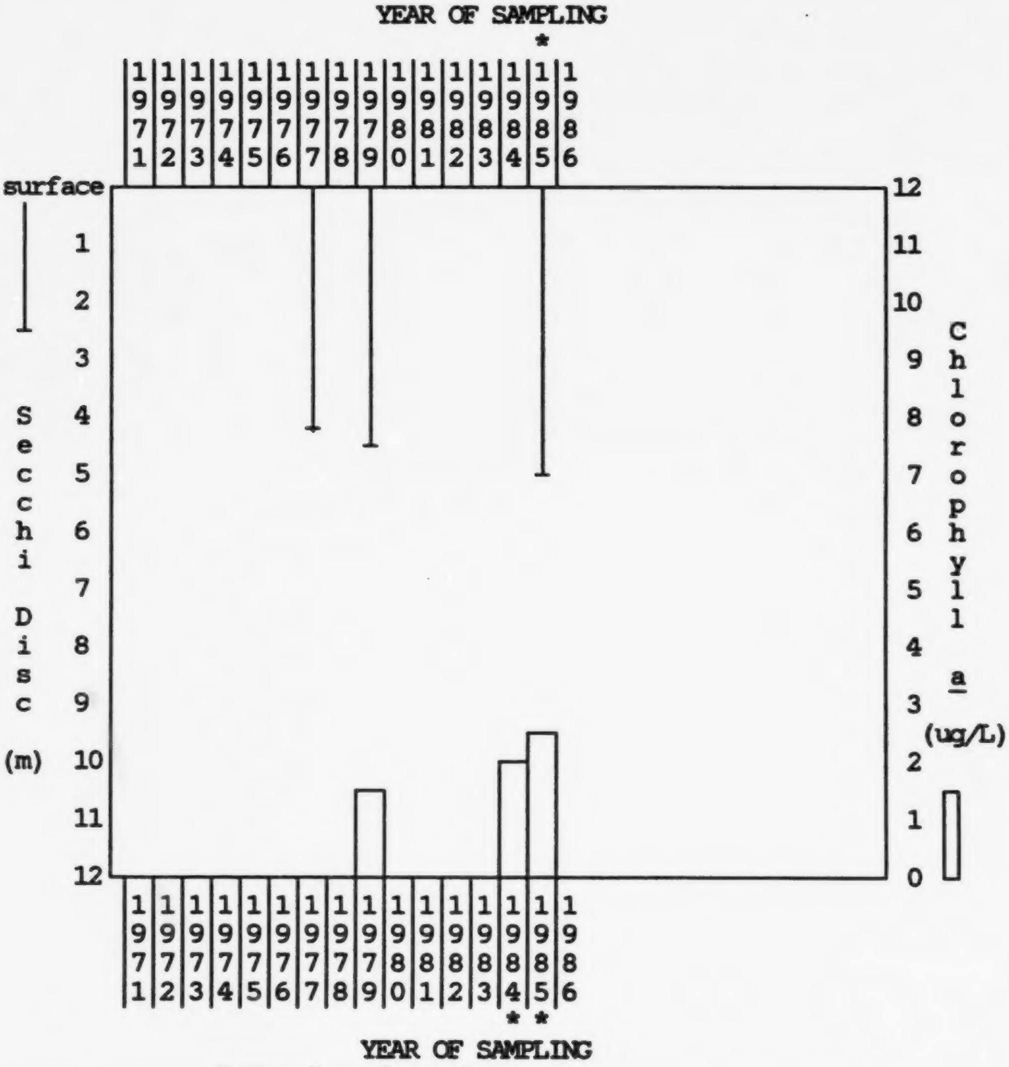
Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Catchacoma Lake (North station) from 1977 to 1985. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* Based on 4 samples.

We now have 3 years of data for Catchacoma Lake North station. The degree of water clarity has been moderately high and the densities of suspended algae have been moderately low for the period of record. We hope that sampling continues in 1986 with increased sampling frequency in order to establish a reliable long-term record of water quality at this station.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Catchacoma Lake (South station) from 1977 to 1985. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results were required for graphing.



* Based on 4 samples

We now have 3 years of data available for Catchacoma Lake South station.

The degree of water clarity has been moderately high for the period of record and the densities of suspended algae have been low to moderate.

We hope sampling continues at this location in order to establish a good long-term record of water quality.

Chandos Lake

Township of Chandos

County of Peterborough

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Chandos Lake in 1985

Station	Channel		South Bay	
Date	S.D.	Chl.a	S.D.	Chl.a
May 20	4.3	LA	4.3	LA
June 7	5.3	2.1	4.8	2.4
June 21	4.7	3.8	5.3	3.7
Aug 5	4.2	1.4	4.0	1.8
Sept 15	4.3	1.6	4.5	1.5
	4.6	2.2	4.6	2.4

Chandos Lake was sampled on 5 occasions from May 20 to Sept.15.
Secchi disc readings were similar at both stations averaging 4.6 m in the Channel and South Bay, indicating a moderately high degree of water clarity.
Chlorophyll a concentrations ranged from low to moderately high on June 21. The average concentrations of 2.2 ug/L in the Channel and 2.4 ug/L in South Bay indicated that moderately low densities of suspended algae were present.
Based on the 1985 results, Chandos Lake would be considered moderately enriched.

Figure 1: The relationship between Secchi disc and chlorophyll a for Chandos Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means.

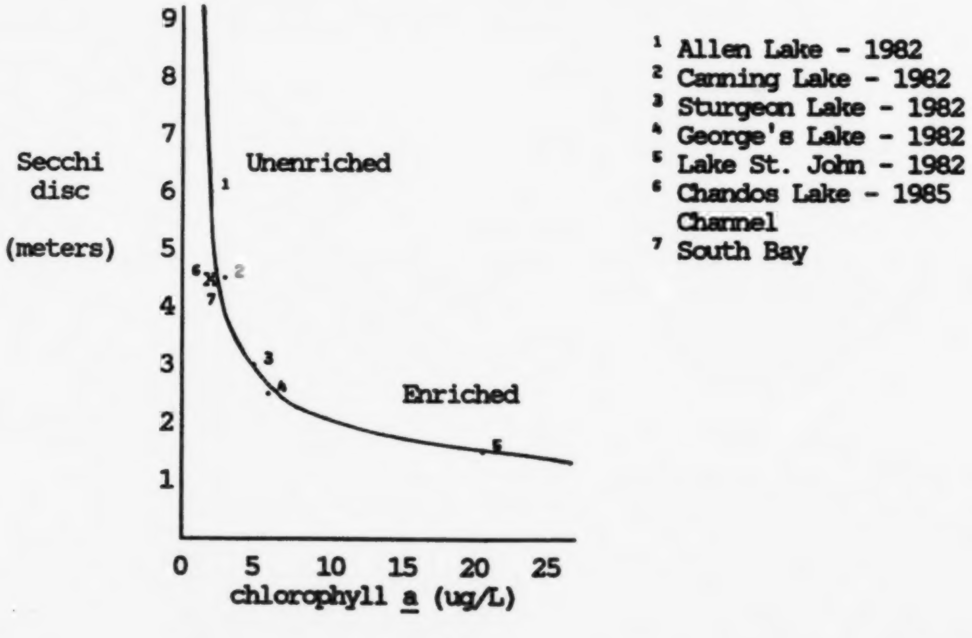
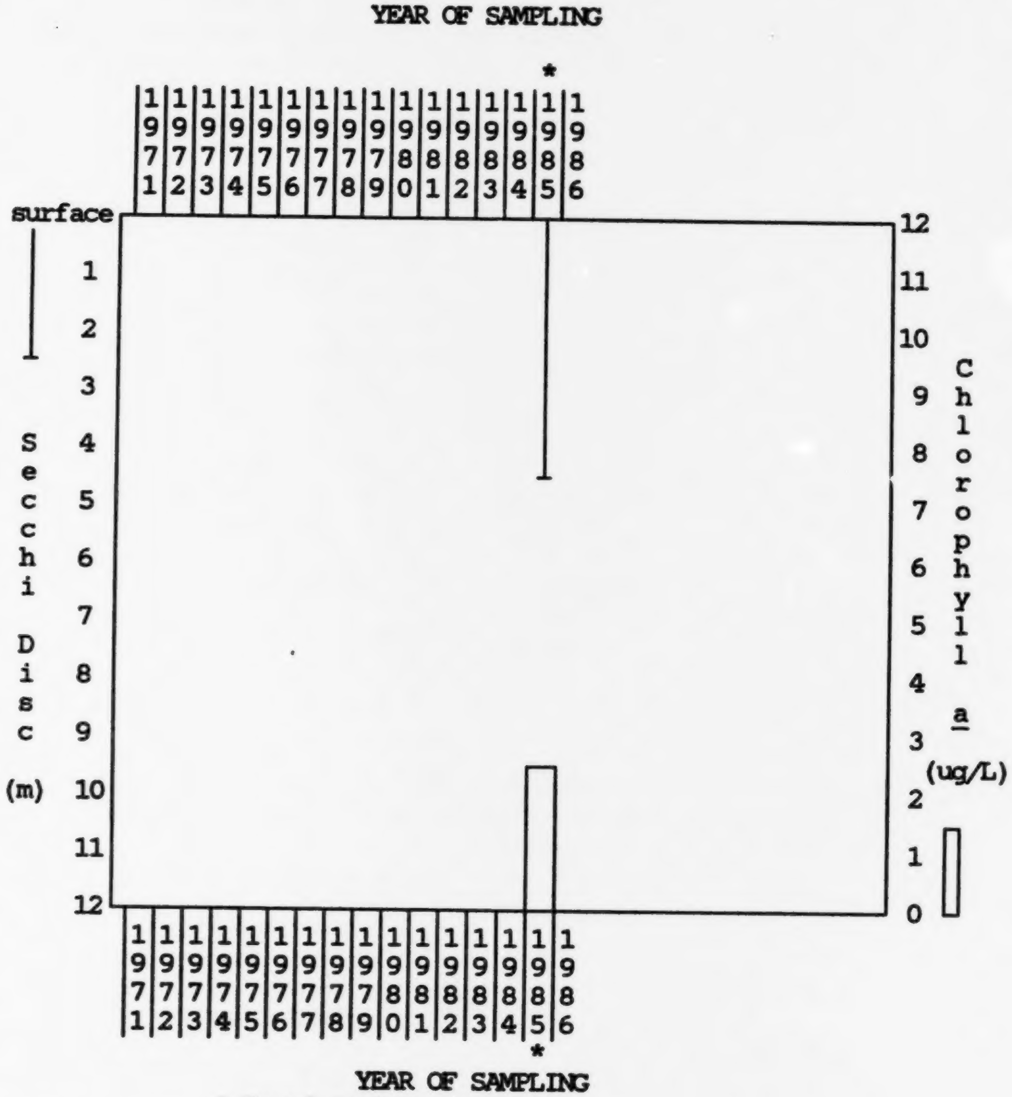


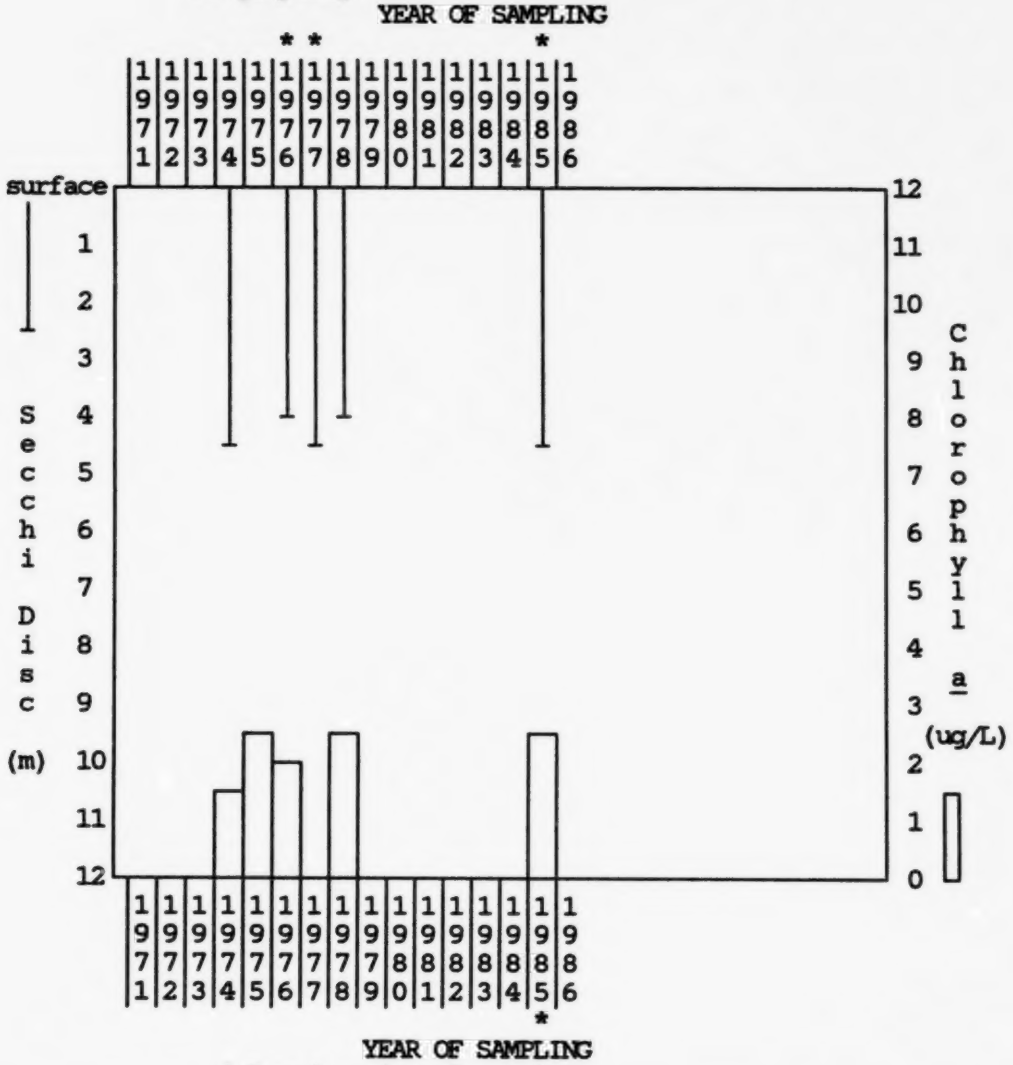
Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Chandos Lake (Channel) in 1985.
A minimum of 4 results were required for graphing.



* Based on 4 or 5 samples

We have only 1 year of data available for this station so no comments concerning long-term water quality trends can be made.
We hope that sampling continues in 1986 in order to establish a continuous water quality record for this location.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Chandos Lake (South Bay) from 1972 to 1985. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results were required for graphing.



* Based on 4 or 5 samples

We now have 5 years of data for South Bay of Chandos Lake.

The degree of water clarity has been moderately high for the period of record and the densities of suspended algae have been moderately low.

There has been no overall change in water quality at this location since 1974.

We hope sampling continues in 1986 in order to maintain a continuous long-term record of water quality.

Clear Lake

Digby Township

County of Victoria

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data from Clear Lake in 1985

Station	North End		Centre	
Date	S.D.	Chl.a	S.D.	Chl.a
May 20	4.5	1.3	5.5	1.4
June 9	5.5	L0.7*	6.5	L0.8*
July 1	6.0	L0.8*	5.5	L0.9*
July 28	4.5	1.8*	4.5	1.9*
Aug 5	4.0	1.8*	4.5	2.1*
Aug 11	3.5	2.3*	3.5	2.0*
Aug 18	3.0	2.1*	3.0	2.2*
Sept 1	3.0	1.6*	3.5	1.2*
Oct 15	4.0	1.4*	3.5	1.3*
	4.2	L1.5*	4.4	L1.5*

* chlorophyll samples taken through a depth greater than twice Secchi depth

A very good sampling program was done on Clear Lake in 1985. Secchi disc readings at both stations were very similar averaging 4.2 m at the North End and 4.4 m at the Centre indicating moderately clear water. Densities of suspended algae were low with average chlorophyll a concentrations of 1.6 ug/L at the North End and 1.5 ug/L at the Centre.

Based on these results, Clear Lake would be considered unenriched with a lower degree of water clarity than usual.
If sampling is done in 1986, please take chlorophyll samples through a depth of twice the Secchi depth.

Figure 1: The relationship between Secchi disc and chlorophyll a for Clear Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means.

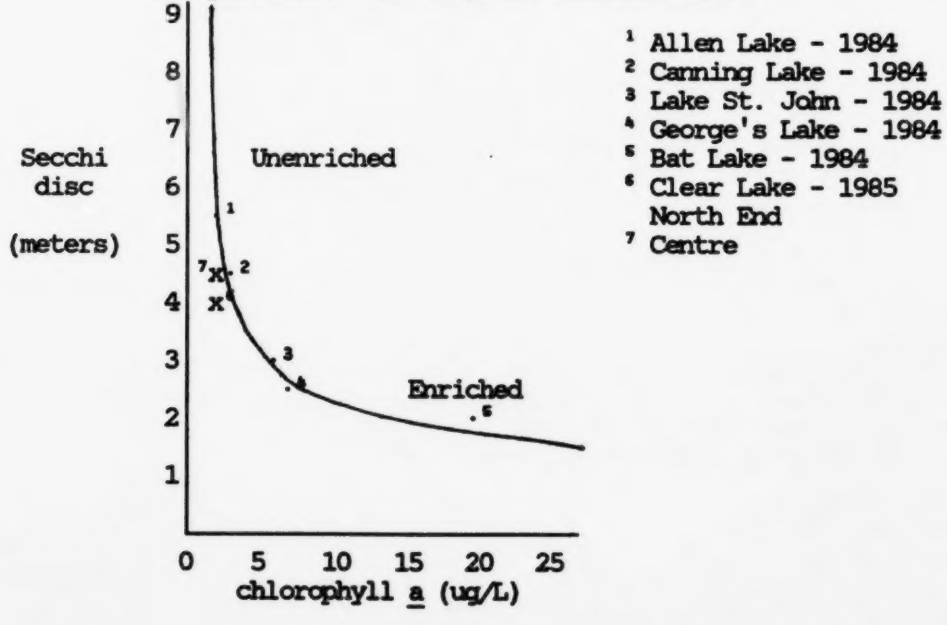
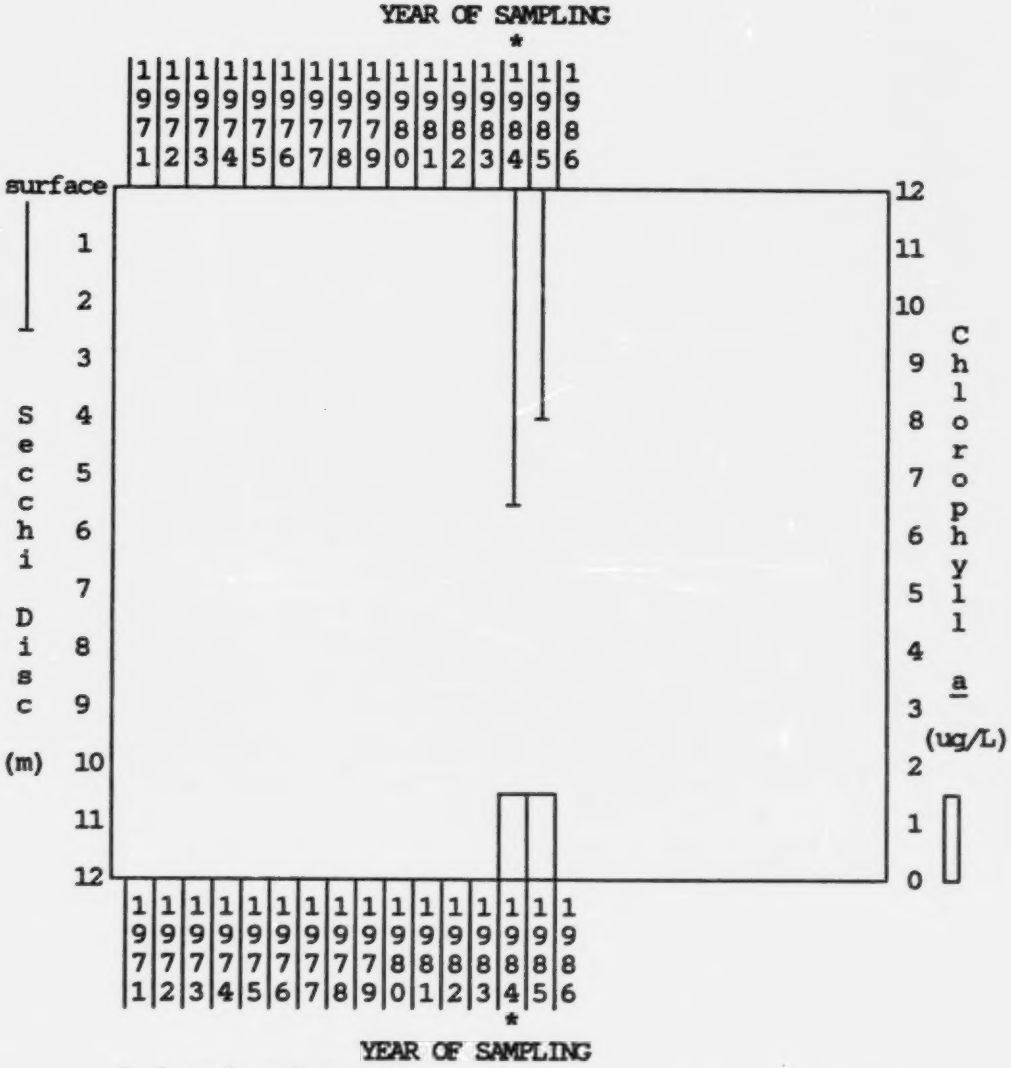


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Clear Lake (North End) in Victoria from 1984 and 1985. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



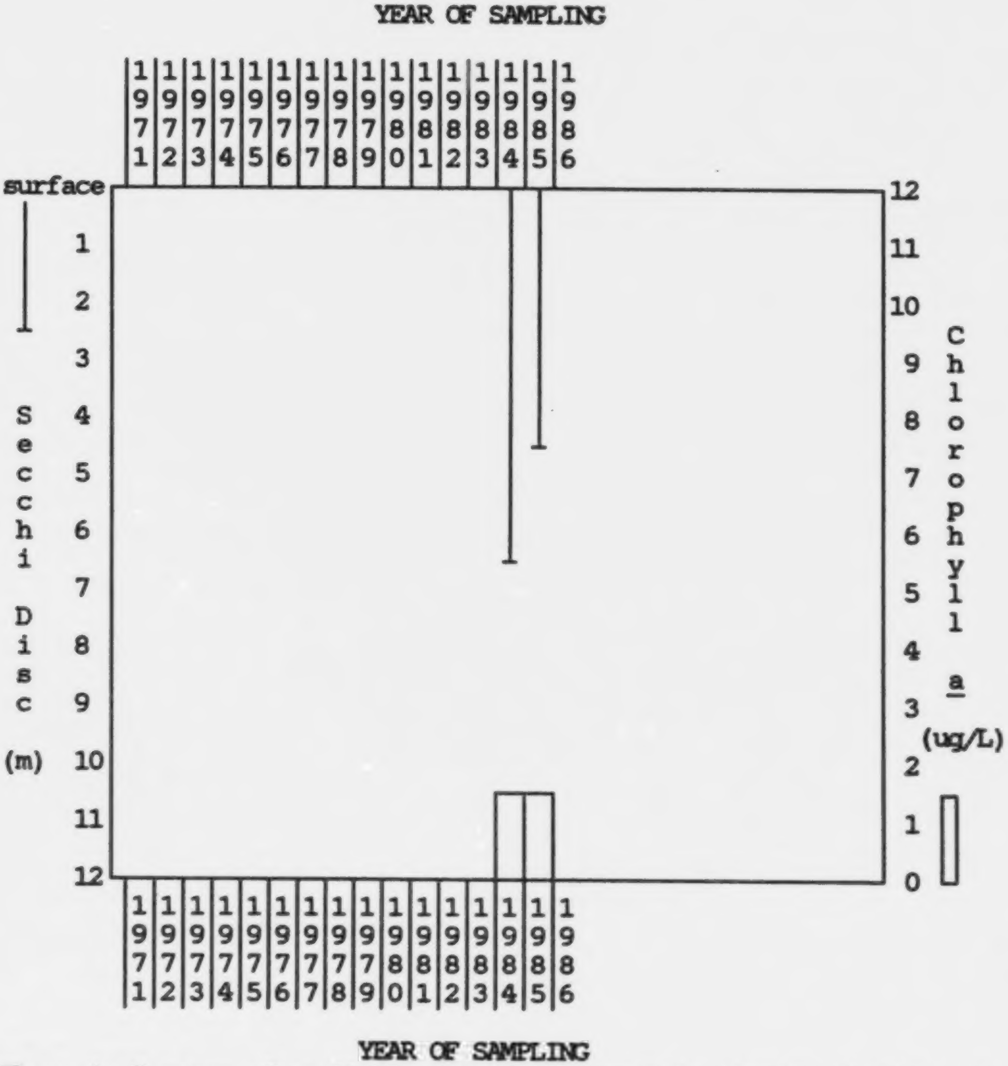
* based on 4 results

Two years of available data for the North end of Clear Lake are not yet sufficient to comment on any long-term trends in water quality.

The degree of water clarity was high in 1984 but only moderately high in 1985. The reason for this is not apparent since densities of suspended algae were low for both years.

We hope sampling continues in 1986.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Clear Lake (Centre) in Victoria from 1984 to 1985. Seasonal mean data (more than 6 sampling dates) only.



There is 2 years of available data for Clear Lake (Centre Station) in Victoria.

The degree of water clarity was high in 1984 but only moderately high in 1985. The reason for this is not apparent since the densities of suspended algae were low for both years at this location.

We hope that sampling continues in 1986 in order to establish a long term record of water quality for this station.

Clearwater Lake

Morrison Ward
Town of Gravenhurst

District Municipality of
Muskoka

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Clearwater Lake in 1985

Station	Centre	
Date	S.D.	Chl.a
July 1	5.0	1.4
Aug 5	6.7	1.5
Aug 18	5.5	1.8
Sept 2	5.5	2.1
	5.7	1.7

Clearwater Lake was sampled on 4 occasions in 1985.
The results obtained indicated a high degree of water transparency with Secchi disc readings ranging from 5.0 to 6.7 m.
Chlorophyll a concentrations were low, ranging from 1.4 to 2.1 ug/L, indicating that low densities of suspended algae were present.
Insufficient sampling was done to obtain reliable means since Clearwater Lake was sampled less than 6 times.

Figure 1: The relationship between Secchi disc and chlorophyll a for Clearwater Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means except for Clearwater Lake.

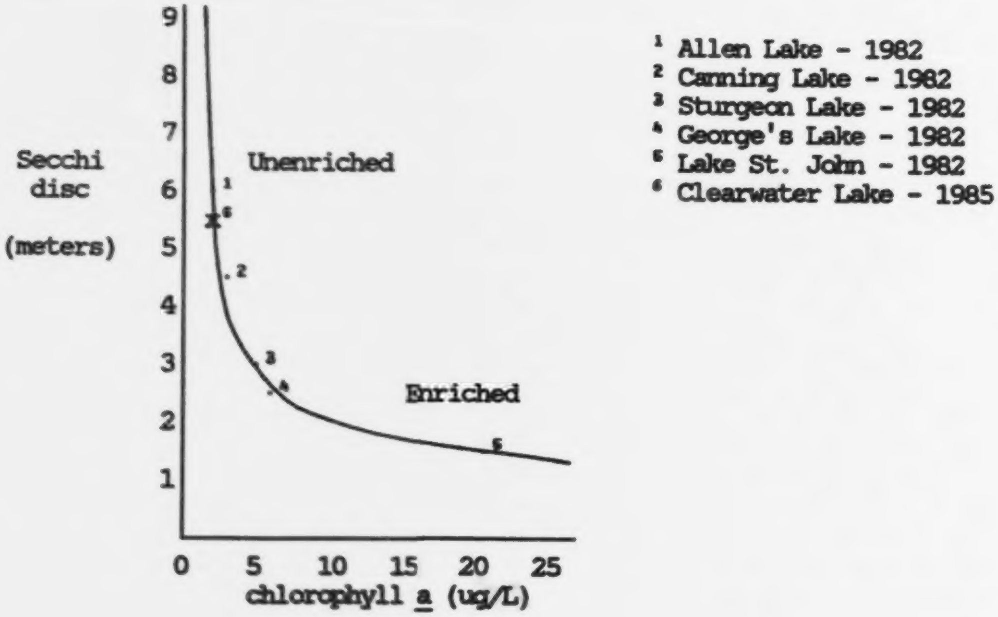
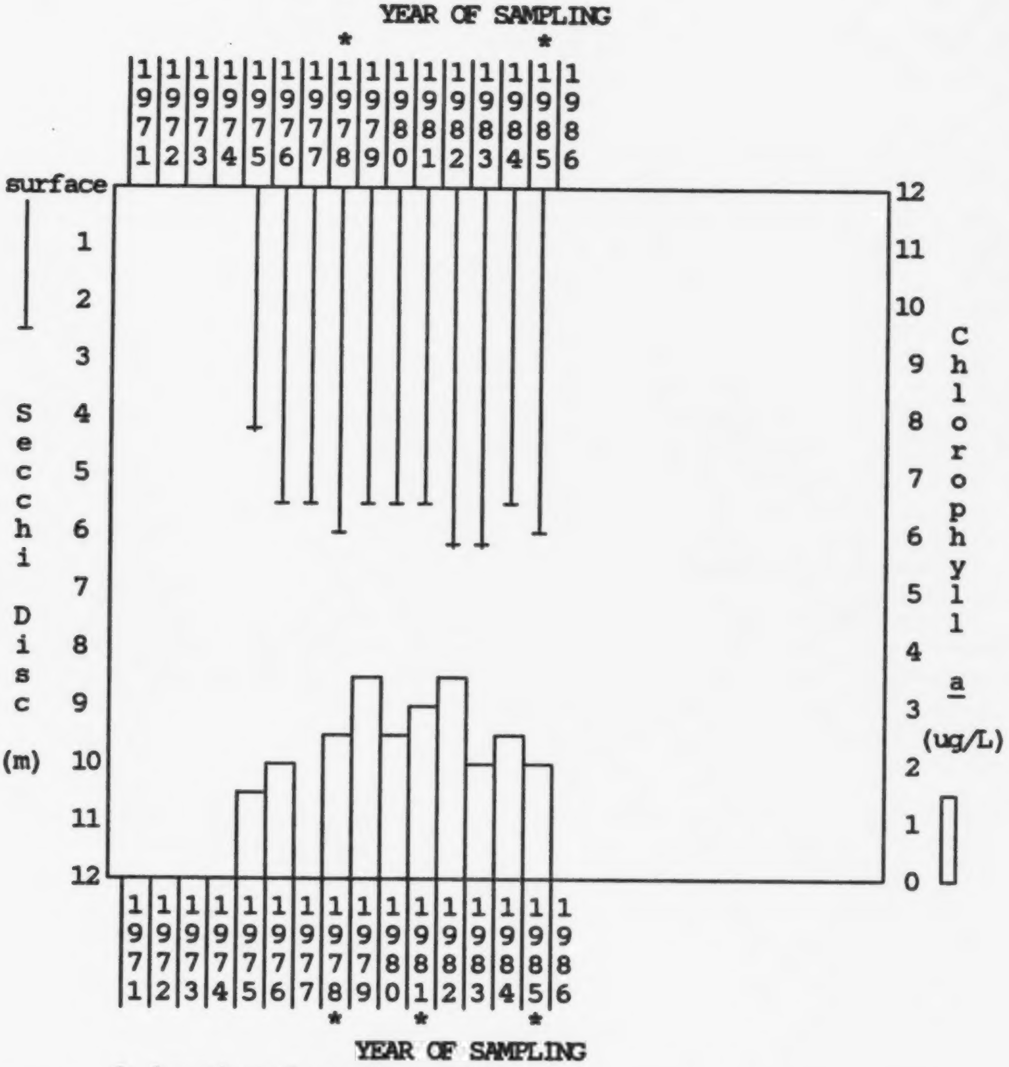


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Clearwater Lake from 1975 to 1985. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* based on 5 sample results

A good historical record of water quality has been established for Clearwater Lake with 9 years of data.

These results indicate that the degree of water transparency from 1976 to 1984 has been consistently high, ranging from 5.3 to 6.3 m. In 1975, a low reading of 4.3 m was recorded.

Chlorophyll a concentrations increased from 1.5 ug/L in 1975 to 3.4 ug/L in 1979 and has ranged from 2.0 to 3.5 ug/L since 1980. These concentrations indicate that Clearwater Lake supports moderate densities of suspended algae.

There has been no noticeable change in water quality in Clearwater Lake with data indicating a lake borderline between moderately enriched and enriched.

Clement Lake

Monmouth Township

County of Haliburton

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Clement Lake in 1985

Station	North End		South End	
Date	S.D.	Chl.a	S.D.	Chl.a
June 9	4.1	1.7	4.1	1.8
June 23	4.5	1.9	4.5	2.0
July 21	3.0	1.1	3.0	1.3
July 28	3.0	2.5	3.0	2.4
Aug 5	3.0	1.5	4.0	1.4
Aug 11	4.0	1.7	4.0	1.8
Aug 18	3.0	1.8	3.0	1.8
Sept 2	4.0	1.9	4.0	1.9
	3.6	1.8	3.7	1.8

An excellent sampling program was done on Clement Lake in 1985 with 8 sampling occasions.
Secchi disc readings averaged 3.6 m in the North End and 3.7 m in the South End. These results indicated a moderate degree of water transparency.
Chlorophyll a concentrations averaged 1.8 ug/L at the North End and the South End indicating low densities of suspended algae.
Good water quality was observed in Clement Lake in 1985, indicative of moderately enriched to unenriched conditions.

Figure 1: The relationship between Secchi disc and chlorophyll a for Clement Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means.

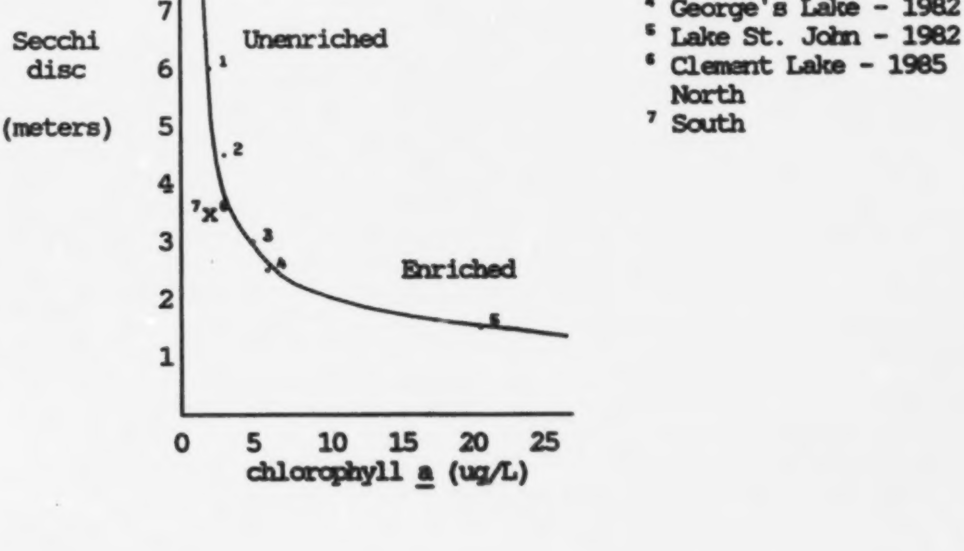
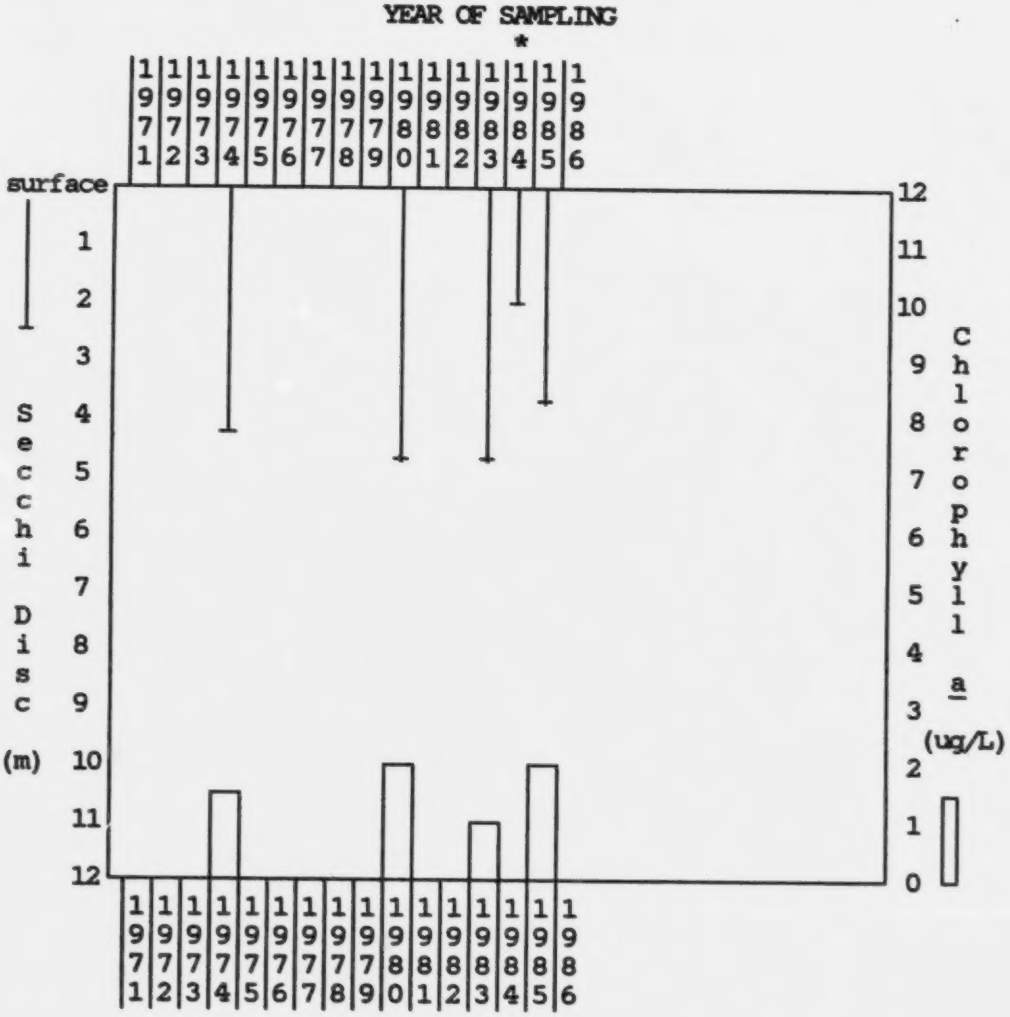


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Clement Lake (North or West station) from 1974 to 1985. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results were required for graphing.

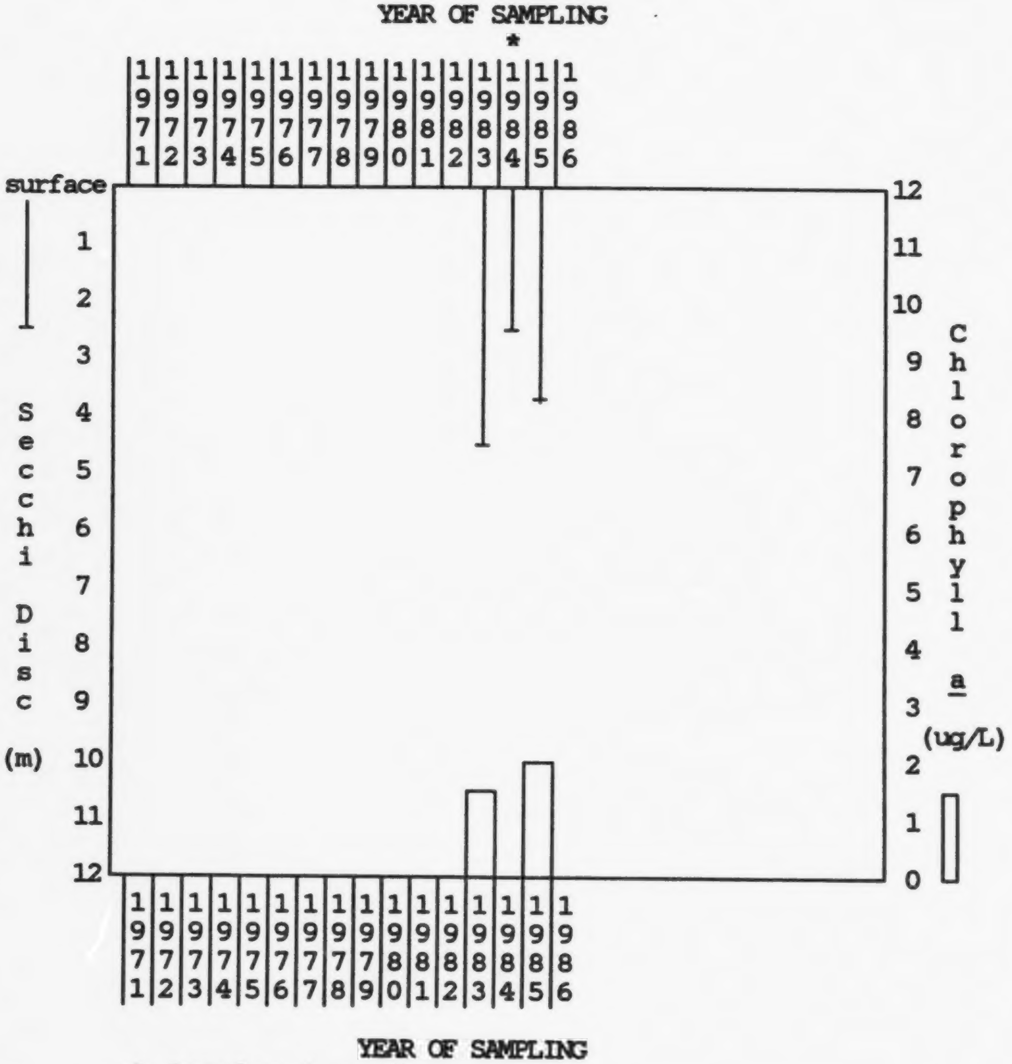


YEAR OF SAMPLING

* based on 4 results

We have 3 years of reliable seasonal average data for the North station of Clement Lake. These results indicate that there has been no overall change in water quality at this station since 1974.
The Secchi disc readings have ranged from 4.3 to 4.7 m indicating a moderately high degree of water clarity.
Chlorophyll a concentrations have ranged from 1.2 to 2.2 ug/L indicating moderately low densities of suspended algae.
The 1980 Secchi disc results were based on 4 readings and were unusually low compared to data from other years.
We hope that sampling continues in 1986 on Clement Lake. One station would be adequately reflect the overall lake water quality.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Clement Lake (South station) from 1983 to 1985 Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results were required for graphing.



* based on 4 results

There are 2 years of reliable seasonal average data for the South station of Clement Lake. These results indicate a moderately high degree of water clarity with Secchi disc readings ranging around 4 m. Chlorophyll a concentrations were generally less than 2 ug/L indicating low densities of suspended algae.

These results are very similar to the results from the North station of the lake. One station would be adequate to reflect water quality conditions on a small lake such as Clement Lake.

Crego Lake

Somerville Township

Victoria County

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Crego Lake in 1985

Station	Centre	
Date	S.D.	Chl.a
July 1	3.5	4.6
July 28	3.5	4.5
Aug 5	4.0	5.4
Aug 11	4.0	5.8
Aug 18	4.0	7.2
Aug 25	4.0	8.0
Sept 2	4.0	8.2
Oct 14	4.0	5.2
	-----	-----
	3.9	6.1
	-----	-----

An excellent sampling program was done on Crego Lake in 1985. Secchi disc readings ranged from 3.5 to 4.0 m and averaged 3.9 m, indicating a moderate degree of water transparency. Chlorophyll a concentrations were high ranging from 4.5 to 8.2 ug/L and averaging 6.1 ug/L indicating high densities of suspended algae. Based on these results, Crego Lake would be considered enriched.

Figure 1: The relationship between Secchi disc and chlorophyll a for Crego Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means.

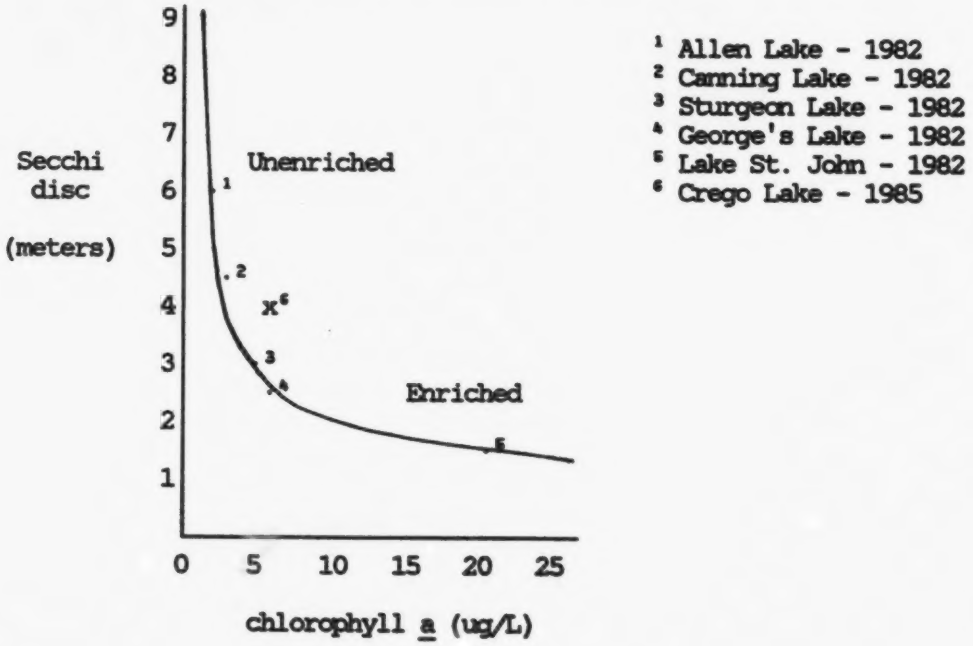
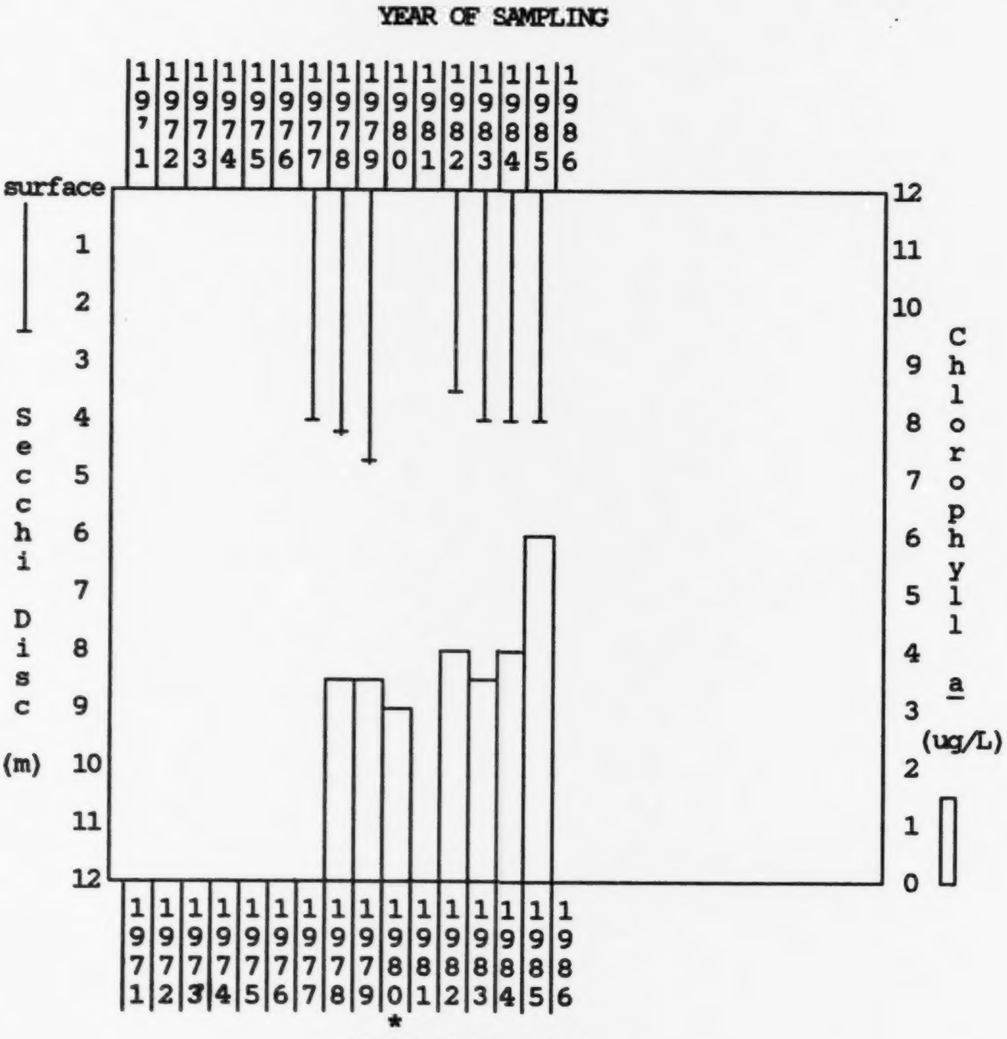


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Crego Lake from 1977 to 1985. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* Based on 4 results

The 7 years of data available for Crego Lake indicates that the degree of water clarity has been moderately high and the densities of suspended algae have also been moderately high except in 1985 when high densities of suspended algae were observed.
We hope that sampling continues in 1986 to monitor any long-term changes in water quality.

Doeskin (Doe) Lake

Muskoka Ward
Town of Gravenhurst

District Municipality of
Muskoka

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Doeskin Lake in 1985

Station	Main	
Date	S.D.	Chl.a
Sept 2	1.7	8.5
Oct 14	1.7	5.3
	1.7	6.9

Insufficient sampling was done in 1985 to obtain any meaningful results. For 1986, we recommend that sampling frequency be increased to at least 6 sampling occasions. In addition, it is important that the lake name, station location description, Secchi disc reading and chlorophyll sample depths are all recorded on the sample submission form which is sent to the lab with the sample.

Figure 1: The relationship between Secchi disc and chlorophyll a for and a number of recreational lakes in the province.

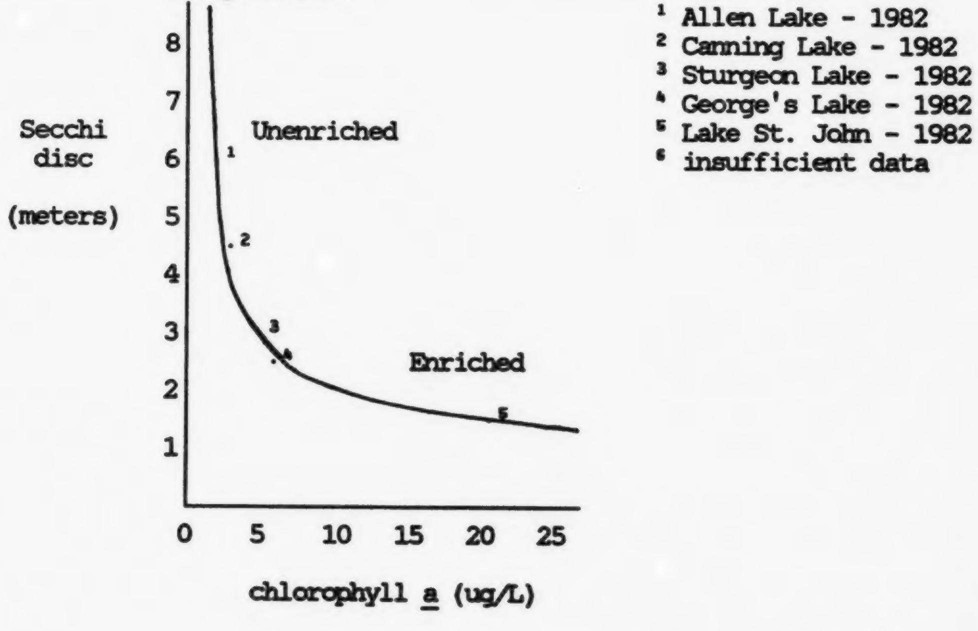
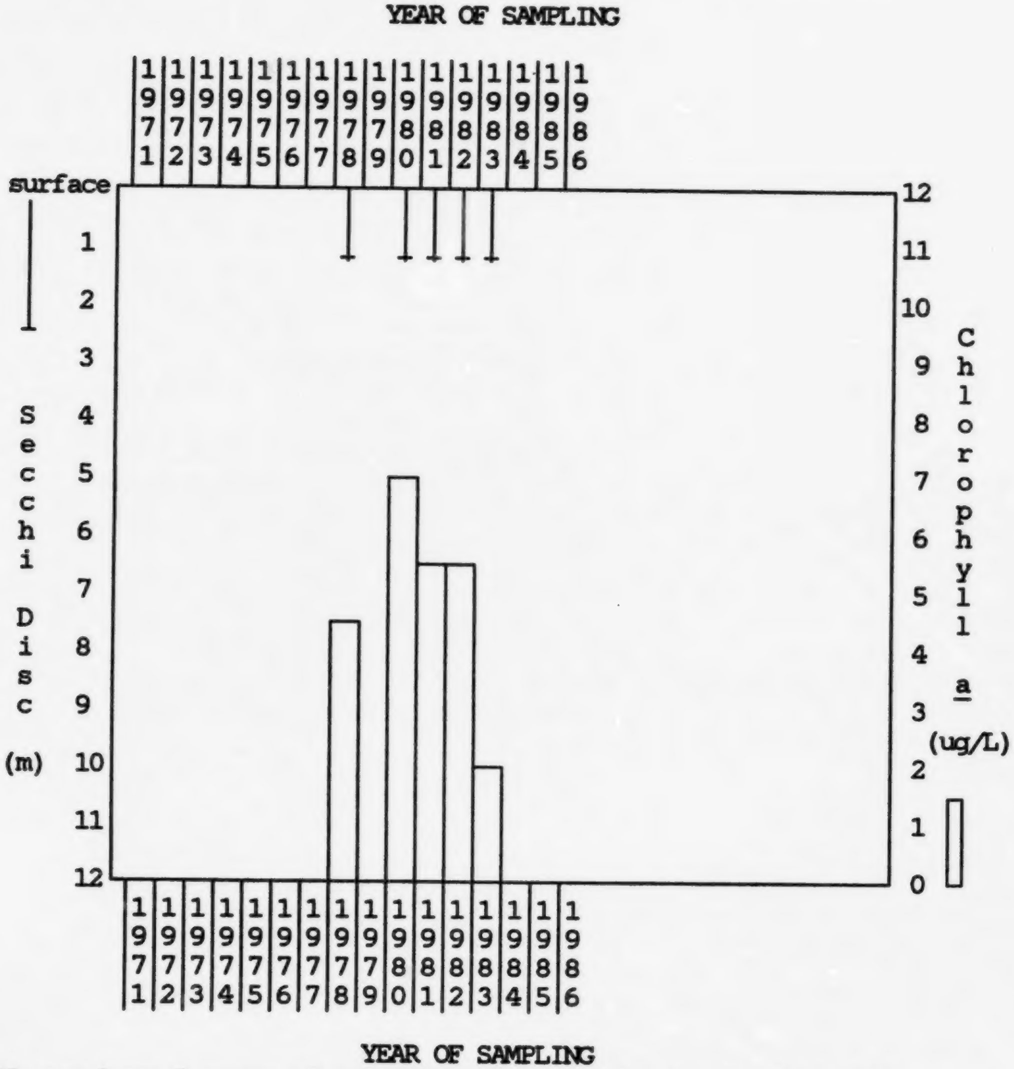


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Doeskin Lake from 1978 to 1983. A minimum of 4 results was required for graphing.



We now have 5 years of reliable seasonal data for Doeskin Lake. These results indicate no overall change in water quality in the lake since 1978. The Secchi disc readings have been consistently low at 1.2 to 1.3 m indicating a low degree of water clarity.

The chlorophyll a concentrations have been highly variable ranging from 2.2 to 7.0 ug/L indicating that densities of suspended algae range from moderately low to high depending on the year.

Insufficient sampling was done in 1984 and 1985 to include the data on the graph.

We hope that sampling continues in 1986 with increased sampling frequency, otherwise the information collected will not be meaningful.

Dummer Lake

Dummer Township

County of Peterborough

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Dummer Lake in 1985

Station	South End	
Date	S.D.	Chl.a
May 20	3.4	3.1*
June 9	3.5	2.6*
June 23	3.4	8.5*
Aug 11	3.25	3.0
Sept 2	2.75	5.2
	3.3	4.5

* chlorophyll sample taken through a depth less than twice Secchi depth

In 1985, Dummer Lake was sampled on 5 occasions from May 20 to Sept.2. Secchi disc readings ranged from 2.75 to 3.5 m and averaged 3.3 m indicating a moderately low degree of water clarity. Chlorophyll a concentrations ranged from 2.6 to 8.5 ug/L and averaged 4.5 ug/L indicating high densities of suspended algae.

Based on these results, Dummer Lake would be considered enriched.

Figure 1: The relationship between Secchi disc and chlorophyll a for Dummer Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means except Dummer Lake.

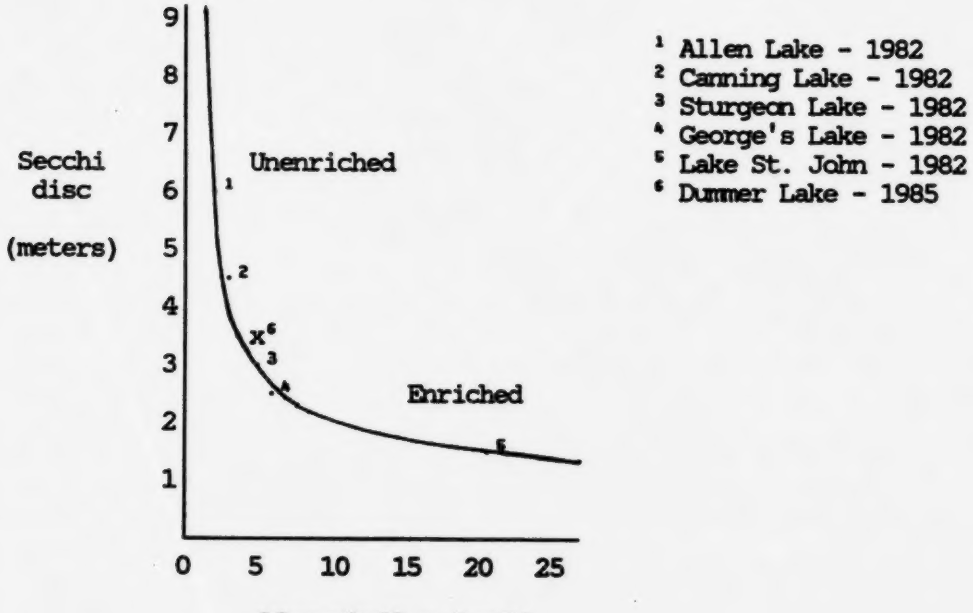
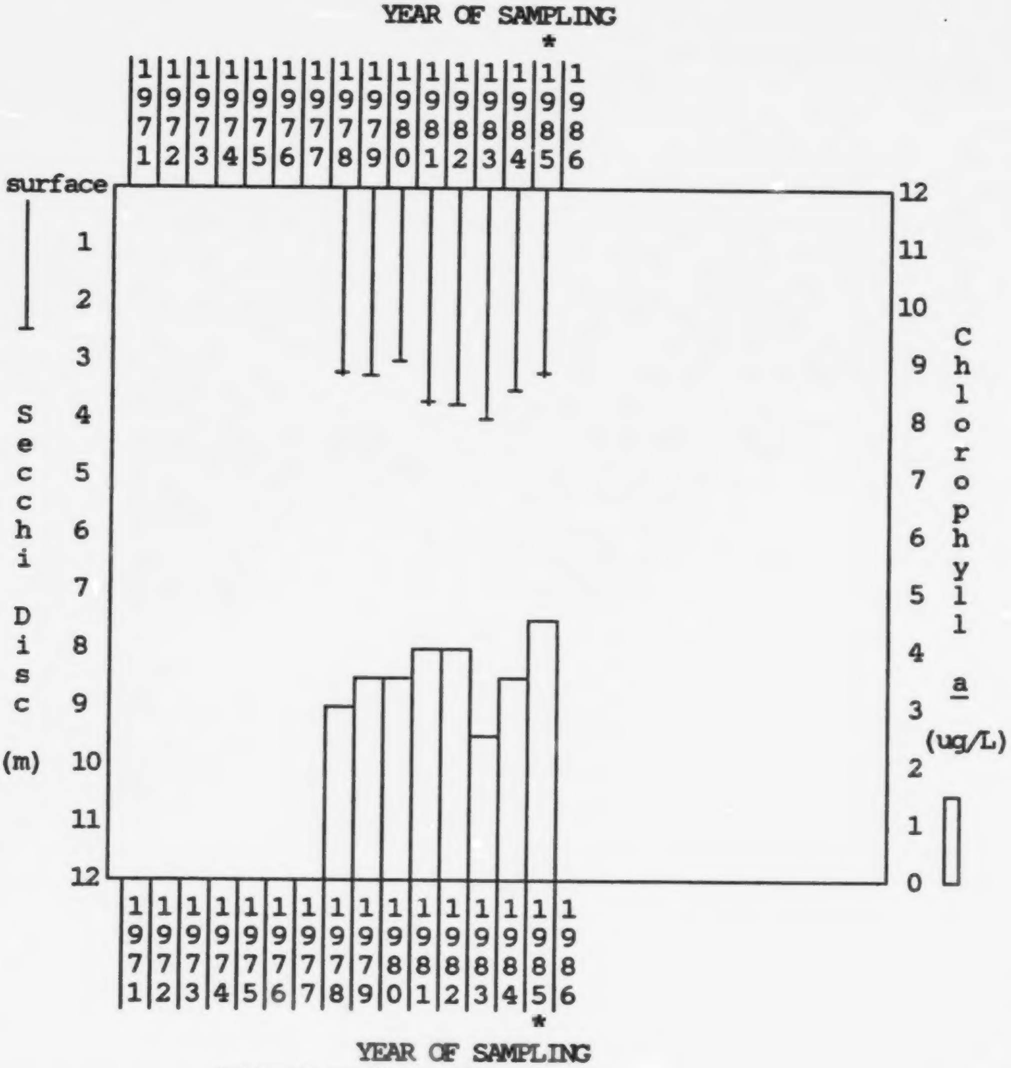


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Dummer Lake from 1978 to 1985. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* Based on 5 results

Based on the 8 years of available data for Dummer Lake, the degree of water clarity has remained moderately low since 1978 with no noticeable change.

Densities of suspended algae have been moderately high for most of this period with high densities observed in 1985. No overall trends in chlorophyll a concentration have been observed.

We hope you continue to sample Dummer Lake in 1986.

East Lake

Harcourt Township

County of Haliburton

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from East Lake in 1985

Station	West End	
Date	S.D.	Chl.a
June 17	5.0	3.2
July 2	6.0	4.1
Aug 5	5.0	3.7
Sept 15	5.0	2.9
	5.3	3.5

Sampling was done on 4 occasions in 1985.
The results of sampling indicated a high degree of water transparency with Secchi disc readings ranging from 5.0 to 6.0 m.
Densities of suspended algae were moderately high with chlorophyll a concentrations ranging from 2.9 to 4.1 ug/L.
Water quality was indicative of moderatley enriched lake with a higher than normal degree of water clarity.

Figure 1: The relationship between Secchi disc and chlorophyll a for East Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means except for East Lake.

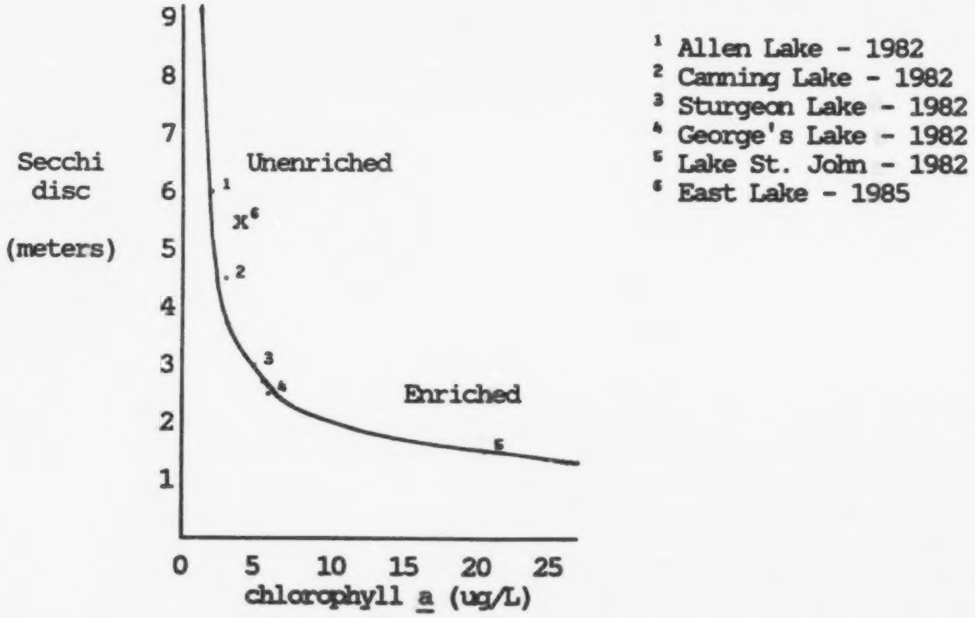
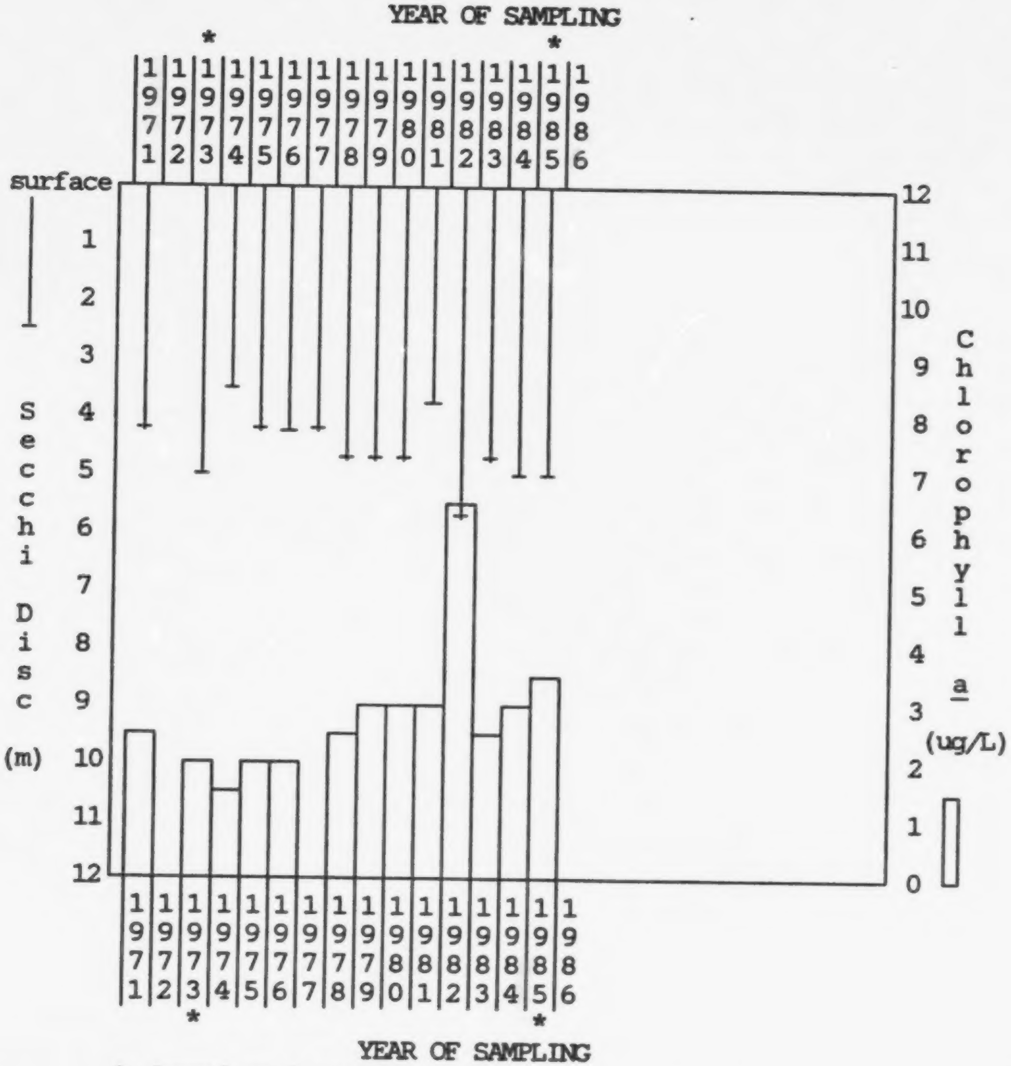


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from East Lake from 1971 to 1985. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results were required for graphing.



* based on 4 results

An excellent historical record of water quality has been established for East Lake with 11 years of reliable seasonal average data. These results indicate that there has been no overall change in the degree of water clarity since 1971. The Secchi disc readings have usually fluctuated around 4.5 m with an unusually high reading of 5.7 m observed in 1982.

The densities of suspended algae have fluctuated from year to year with concentrations ranging from 1.5 to 6.6 ug/L from 1971 to 1984. This fluctuation is often observed in moderately enriched lakes.

We hope that sampling continues in 1986 with increased sampling frequency in order to maintain the excellent record for East Lake.

Echo Lake

McLean Ward
Township of Lake of Bays

District Municipality of
Muskoka

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Echo Lake in 1985

Station	Central	
Date	S.D.	Chl.a
July 27	2.2	3.0
Aug 5	2.9	21.9
Aug 11	2.5	LA
	-----	-----

LA - lab accident

Insufficient sampling was done in 1985 to obtain reliable seasonal means. The results obtained indicated a low degree of water transparency and high densities of suspended algae with an algae bloom occurring on Aug. 5. We recommend that sampling frequency be increased if possible to 6 times per year.

Figure 1: The relationship between Secchi disc and chlorophyll a for and a number of recreational lakes in the province. All data are seasonal means.

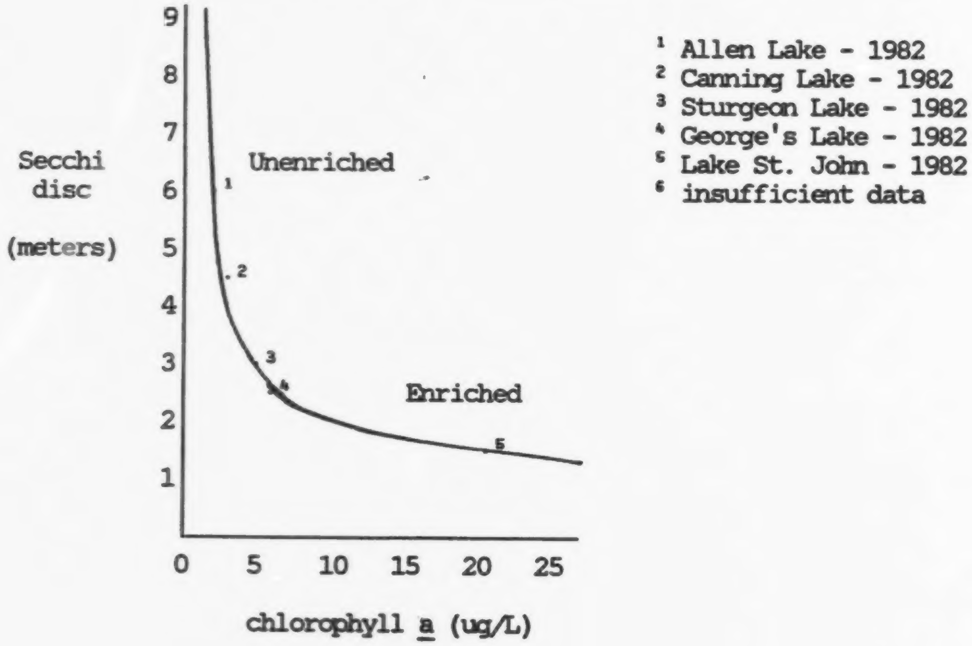
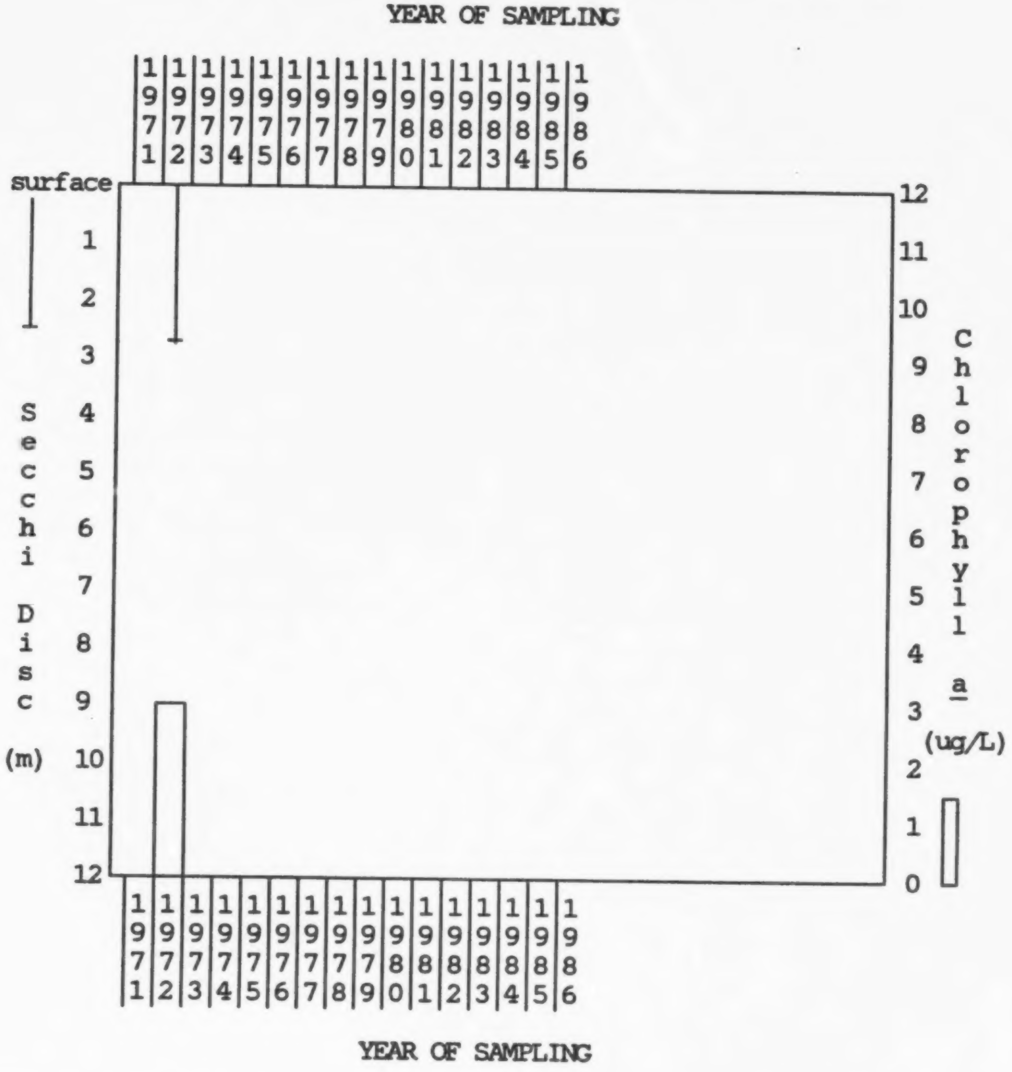


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Echo Lake in 1972.
Seasonal mean data (more than 6 sampling dates) only.
A minimum of 4 results were required for graphing.



The only reliable seasonal mean result was obtained from a 1972 Ministry of Environment survey. The sampling for the Self Help program has not been frequent enough to obtain reliable seasonal average data.

Farlain Lake

Tiny Township

County of Simcoe

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Farlain Lake in 1985

Station	Middle	
Date	S.D.	Chl.a
Aug 17	N G	2.7
Sept 7	N G	2.8
Sept 13	N G	2.3
Oct 17	N G	2.6
	-----	-----
	A 4.0	2.6
	-----	-----

N G - not given due to shallowness of station

A - approximate Secchi disc

In 1985, Farlain Lake was sampled on 4 occasions from Aug.17 to Oct.17. No Secchi disc readings were recorded on the submission forms due to the shallowness of the lake. The chlorophyll a concentrations were moderately low ranging from 2.3 to 2.8 ug/L and averaging 2.6 ug/L indicating that moderately low densities of suspended algae were present.

Figure 1: The relationship between Secchi disc and chlorophyll a for Farlain Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means.

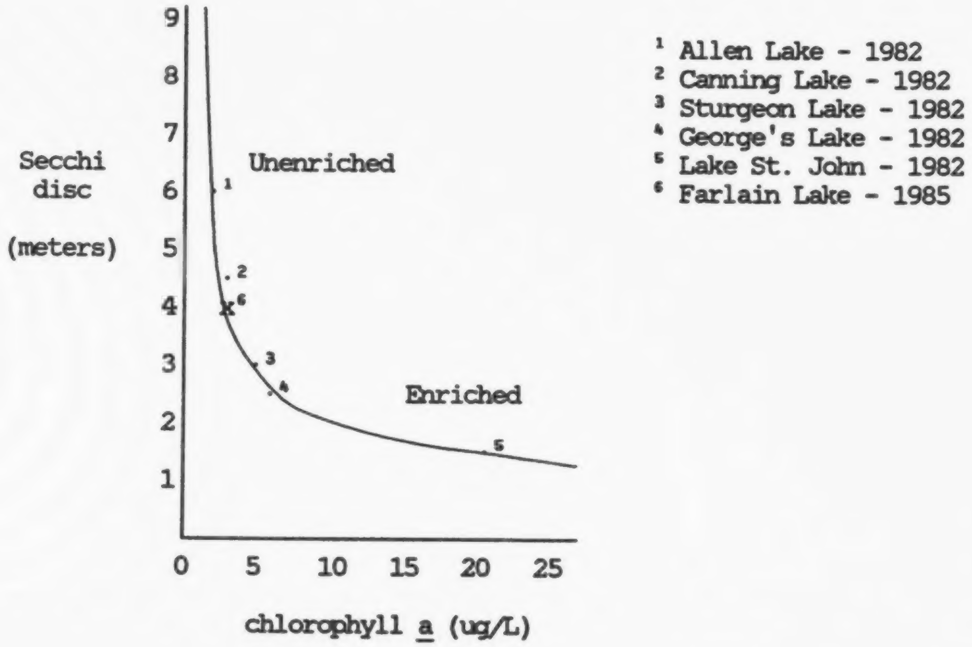
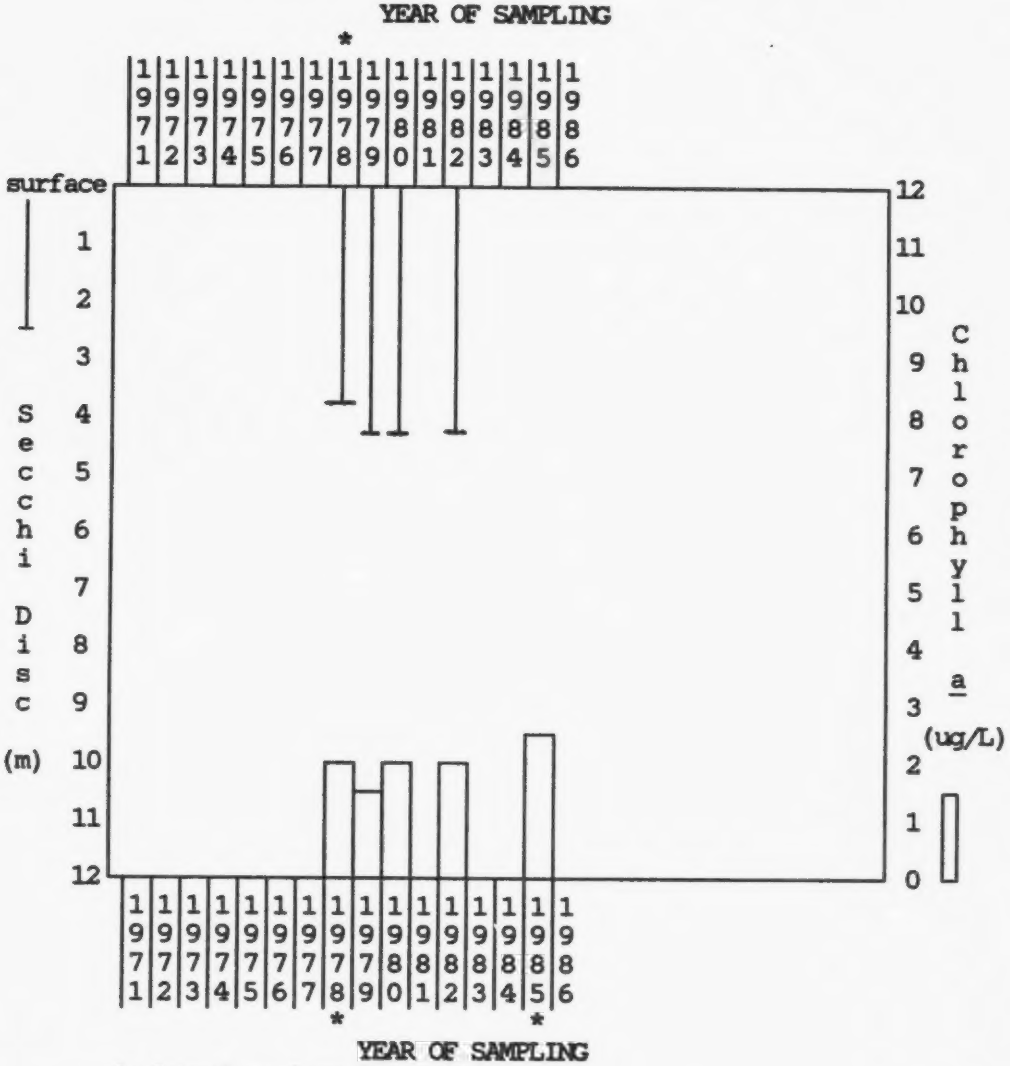


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Farlain Lake from 1978 to 1985. Seasonal mean data (more than 6 sampling dates) only. A minimum of 4 results were required for graphing.



* based on 4 or 5 results

We now have 5 years of data for Farlain Lake.

The degree of water clarity in this lake is impossible to determine due to the shallowness of the lake. The Secchi disc was still visible on the bottom at a depth of about 4 m for the period of record. This indicates a moderately high degree of clarity.

Densities of suspended algae were low to moderately low for the years sampled.

There have been no noticeable changes in water quality in Farlain Lake.

Four Mile Lake

Somerville Township

County of Victoria

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Four Mile Lake in 1985

Station	Centre		North Centre	
Date	S.D.	Chl.a	S.D.	Chl.a
July 28	4.5	2.4	- -	- -
Aug 5 *	5.75	1.7	5.25	2.1
Aug 18	4.25	3.5	- -	- -
Sept 2	5.5	1.5	5.5	L1.0
	-----	-----	-----	------
	5.0	2.3		
	-----	-----	-----	------

L - less than * date not given

In 1985, Four Mile Lake was sampled on 4 occasions at the Centre station and 2 occasions at North Centre station.

Insufficient sampling was done to obtain reliable seasonal averages, however, the results available indicate that the lake has a high degree of water clarity and moderately low densities of suspended algae.

Figure 1: The relationship between Secchi disc and chlorophyll a for Four Mile Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means except Four Mile Lake.

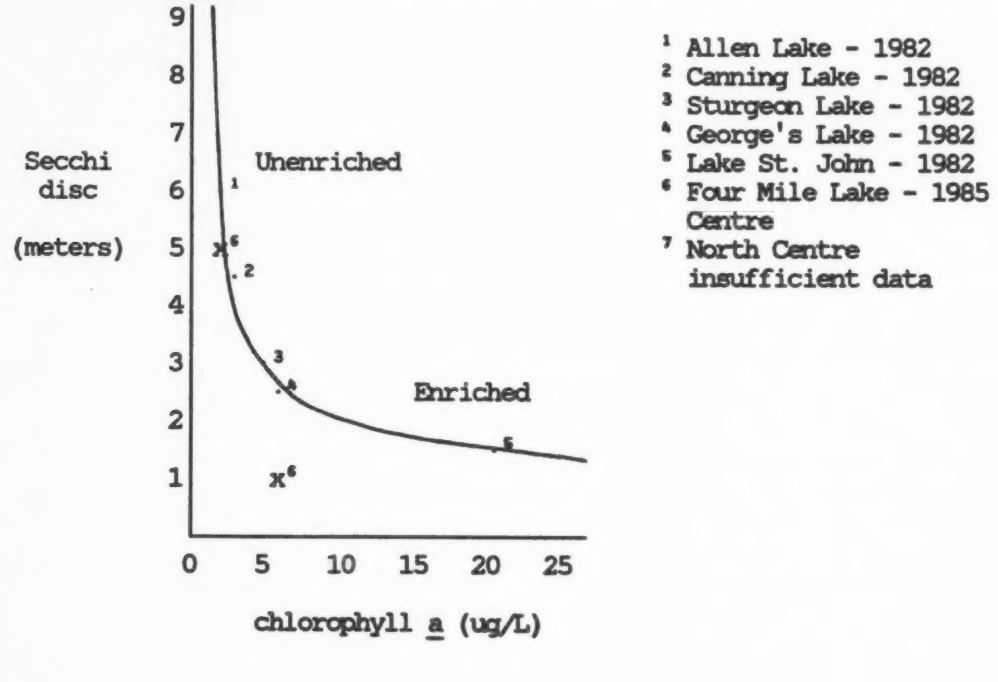
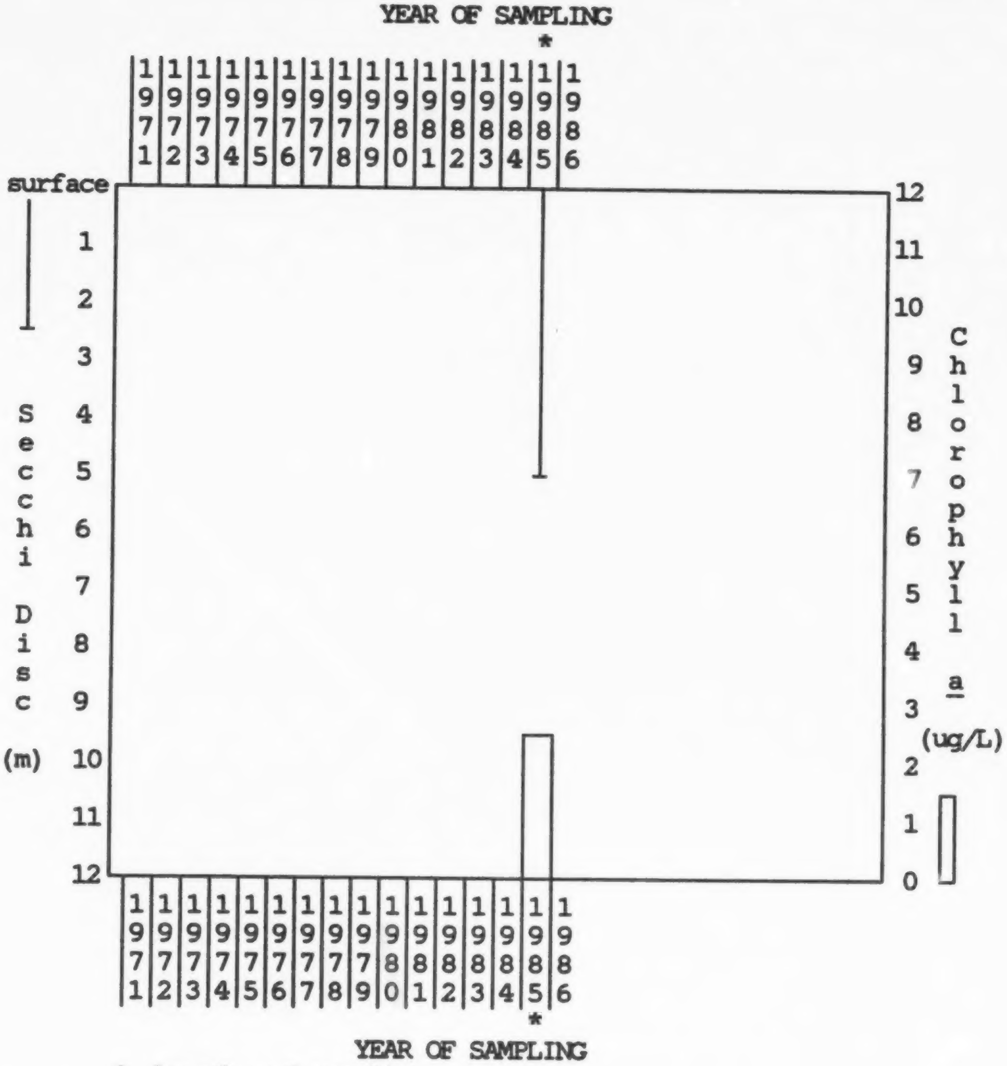


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Four Mile Lake (Centre) in Somerville from 1985. A minimum of 4 results were required for graphing.

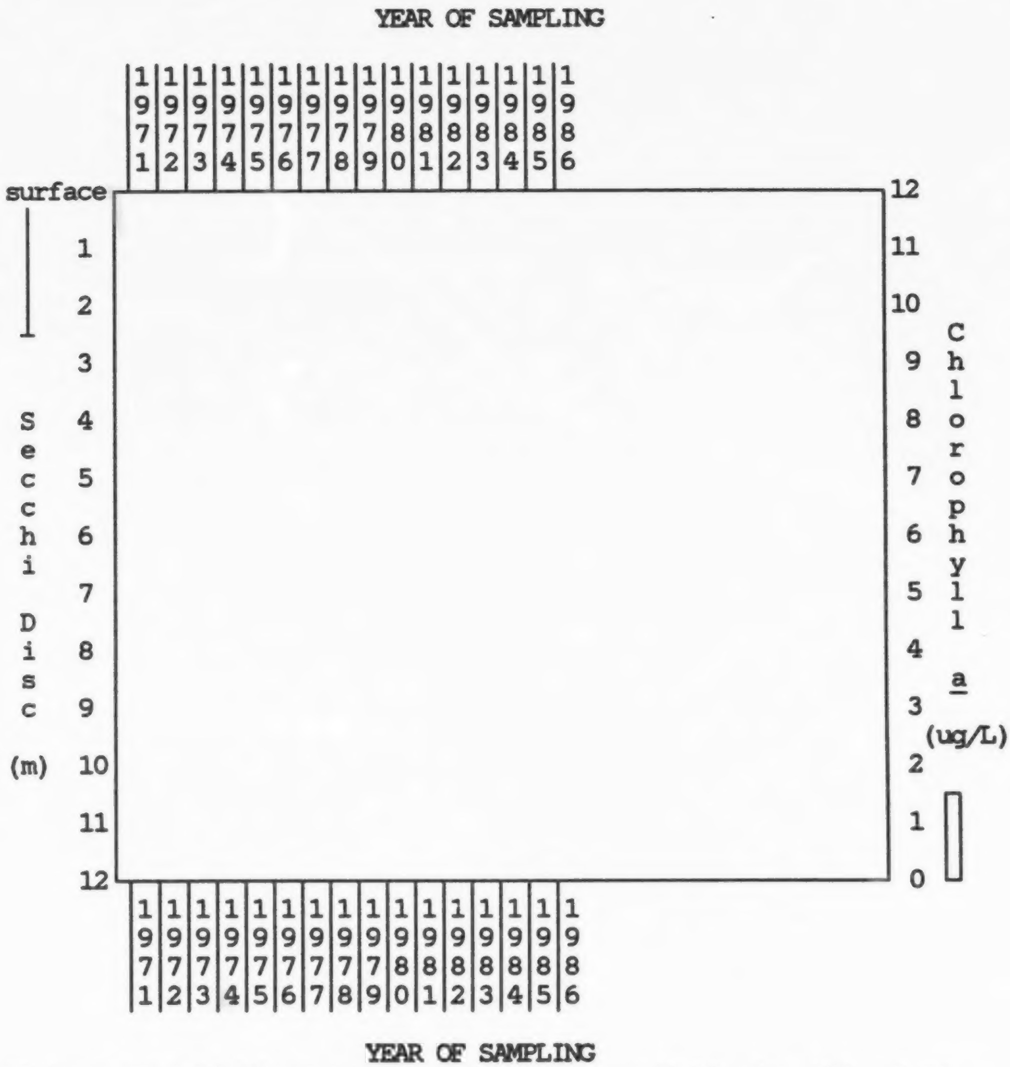


* based on 4 results

There is insufficient information available for Four Mile Lake (Centre station) to make any comment on long-term water quality changes.

We hope that sampling continues in 1986 with increased sampling frequency to establish a continuous record of water quality.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Four Mile Lake (North Centre) in Somerville from 1985. Seasonal mean data (more than 6 sampling dates) only. A minimum of 4 results were required for graphing.



We have no reliable seasonal average data available for this station yet. If sampling is done at this location in 1986, we recommend an increase in sampling frequency if meaningful information is to be obtained.

George's Lake

Harcourt Township

County of Haliburton

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from George's Lake in 1985

Station	Main	
Date	S.D.	Chl.a
June 9	2.5	4.3
July 1	3.0	4.1
Aug 5	3.0	5.4
Aug 11	3.0	7.2
Aug 25	2.5	6.1
Sept 2	2.5	6.3
Oct 14	3.1	10.7
	2.8	6.3

A very good sampling program was done on George's Lake in 1985 with 7 sampling occasions.
Secchi disc readings ranged from 2.5 to 3.1 ug/L and averaged 2.8 ug/L indicating moderately low densities of suspended algae.
Chlorophyll a concentrations were high, ranging from 4.1 to 10.7 ug/L and averaging 6.3 ug/L, indicating increasing densities of suspended algae as the sampling season progressed.
Water quality of George's Lake was typical of enriched conditions.

Figure 1: The relationship between Secchi disc and chlorophyll a for George's Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means.

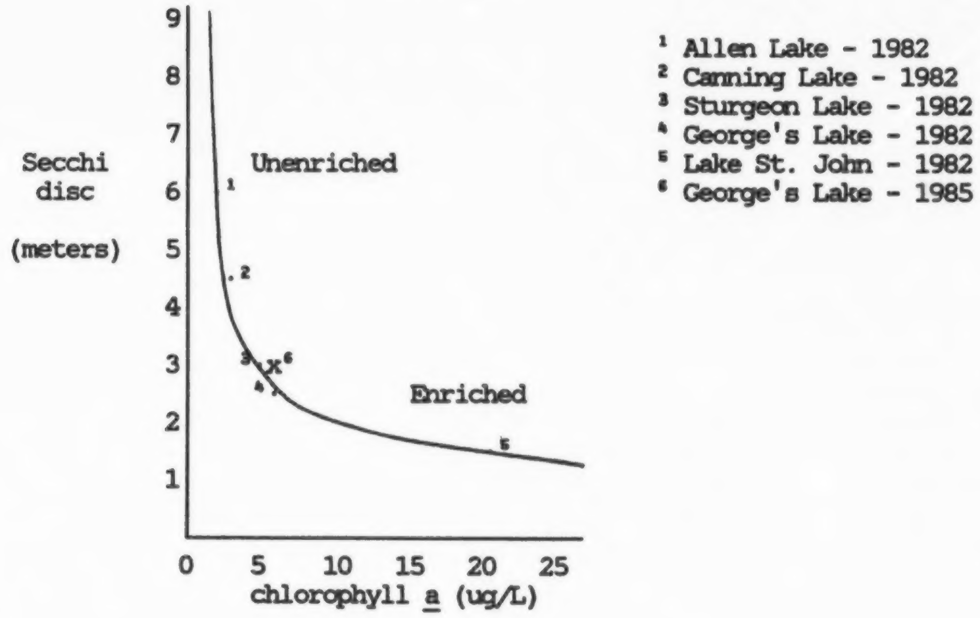
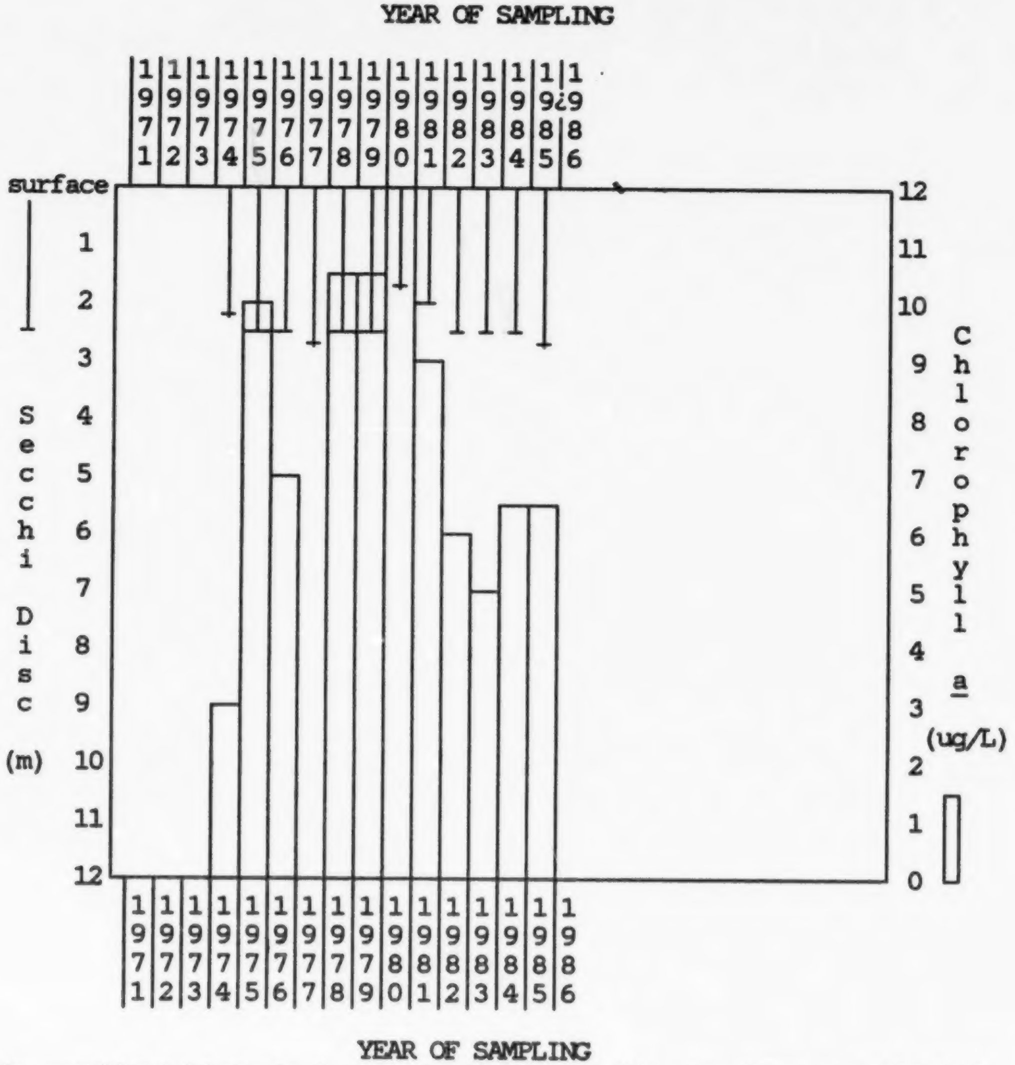


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from George's Lake from 1974 to 1985. Seasonal mean data (more than 6 sampling dates) only.



An excellent historical record of water quality has been established for George's Lake with 11 years of reliable seasonal average data. These results reflect the enriched status of the lake with consistently low Secchi disc readings fluctuating around 2 m. The densities of suspended algae were highly variable as is often the case in enriched lakes with chlorophyll a concentrations ranging from 3.0 ug/L in 1974 to 12.1 ug/L in 1980.

Gibson Lake

Gibson Ward
Township of Georgian Bay

District Municipality of
Muskoka

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Gibson Lake in 1985

Station	In Bay North End		South of Island	
Date	S.D.	Chl.a	S.D.	Chl.a
June 23	1.50	4.4	2.25	4.6
June 30	2.25	3.2	2.75	2.5
	-----	-----	-----	-----

Insufficient sampling was done in 1985 to obtain meaningful results. On the 2 occasions sampled in 1985, the degree of water transparency was low and densities of suspended algae were moderately high.

Figure 1: The relationship between Secchi disc and chlorophyll a for and a number of recreational lakes in the province. All data are seasonal means.

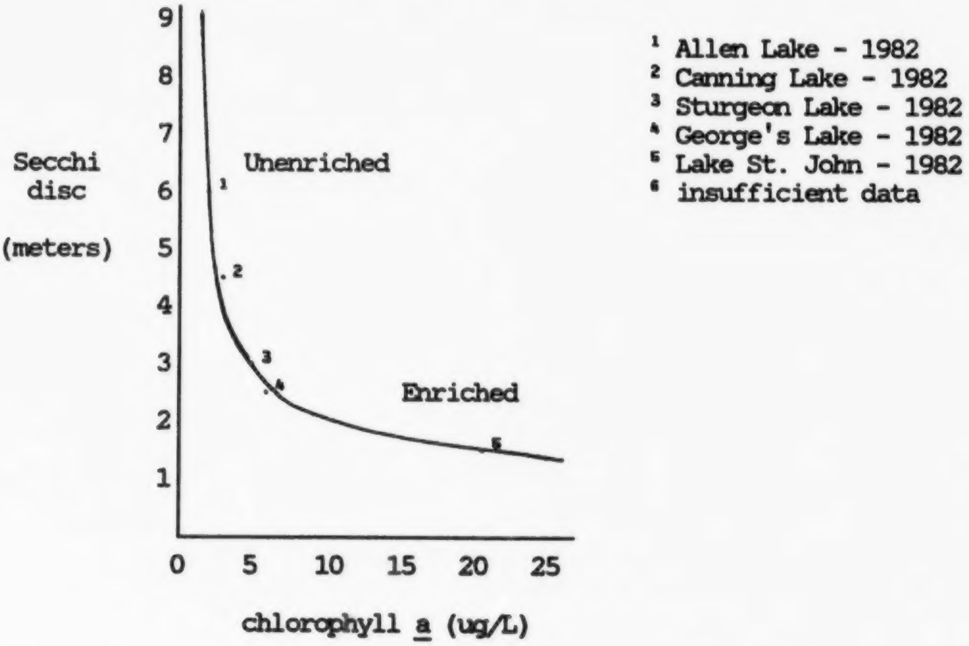
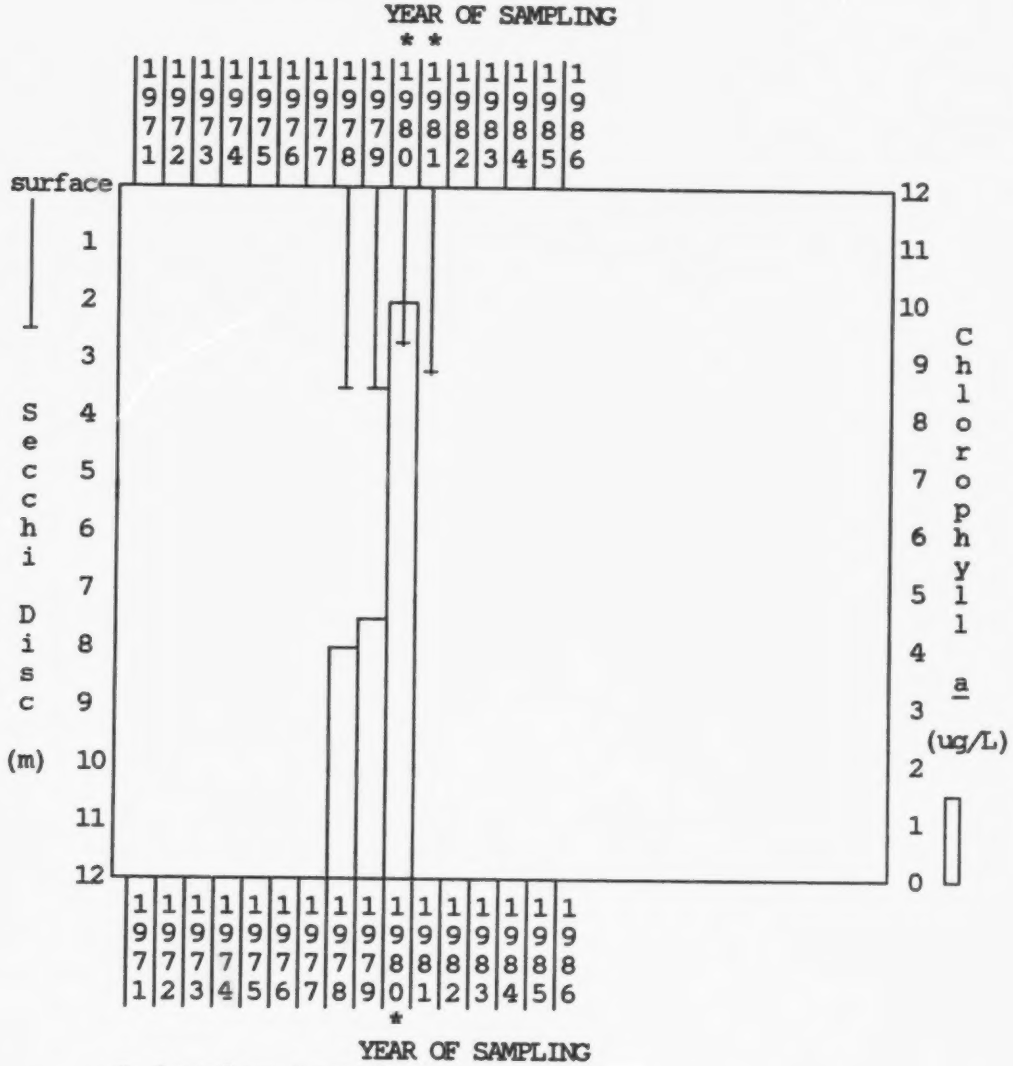


Figure 2 : Summary of results for Secchi disc (m), and chlorophyll a (ug/L) from Gibson Lake from 1978 and 1981. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results were required for graphing.



* based on 4 results

So far, we have only 2 years of reliable seasonal mean data collected from Gibson Lake. This is not sufficient to determine if there have been any changes in water quality however the results indicate a moderately low degree of water clarity and variable densities of suspended algae.

We hope that sampling continues in 1986 with increased frequency in order to obtain reliable sampling results.

Go Home Lake

Gibson Ward
Township of Georgian Bay

District Municipality of Muskoka

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Go Home Lake in 1985

Station	North		South	
Date	S.D.	Chl.a	S.D.	Chl.a
May 19	3.5	L 1.0	3.25	1.1
June 10	4.5	L 1.0	4.0	2.0
June 24	3.0	1.2	4.25	1.1
Aug 4	5.0	1.5	4.0	1.8
Aug 11	5.0	1.7	6.0	2.0
	4.2	L 1.3	4.3	1.6

L - less than

In 1985, Go Home Lake was sampled on 5 occasions. Secchi disc readings at the north station averaged 4.2 m and at the south station averaged 4.3 m, indicating a moderately high degree of water transparency.

Chlorophyll a concentrations were low at both stations, averaging less than 1.3 ug/L at the north station and 1.6 ug/L at the south station. These results indicated that Go Home Lake was unenriched with a lower degree of water transparency, perhaps due to the natural colour of the water. Please ensure that the Secchi disc reading and chlorophyll sample depth are recorded correctly on the sample submission form.

Figure 1: The relationship between Secchi disc and chlorophyll a for Go Home Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means.

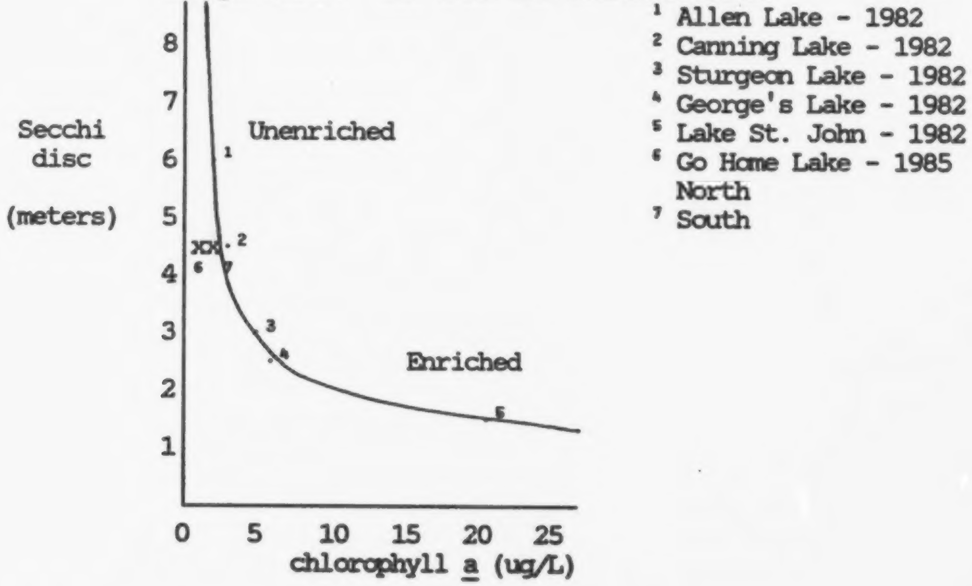
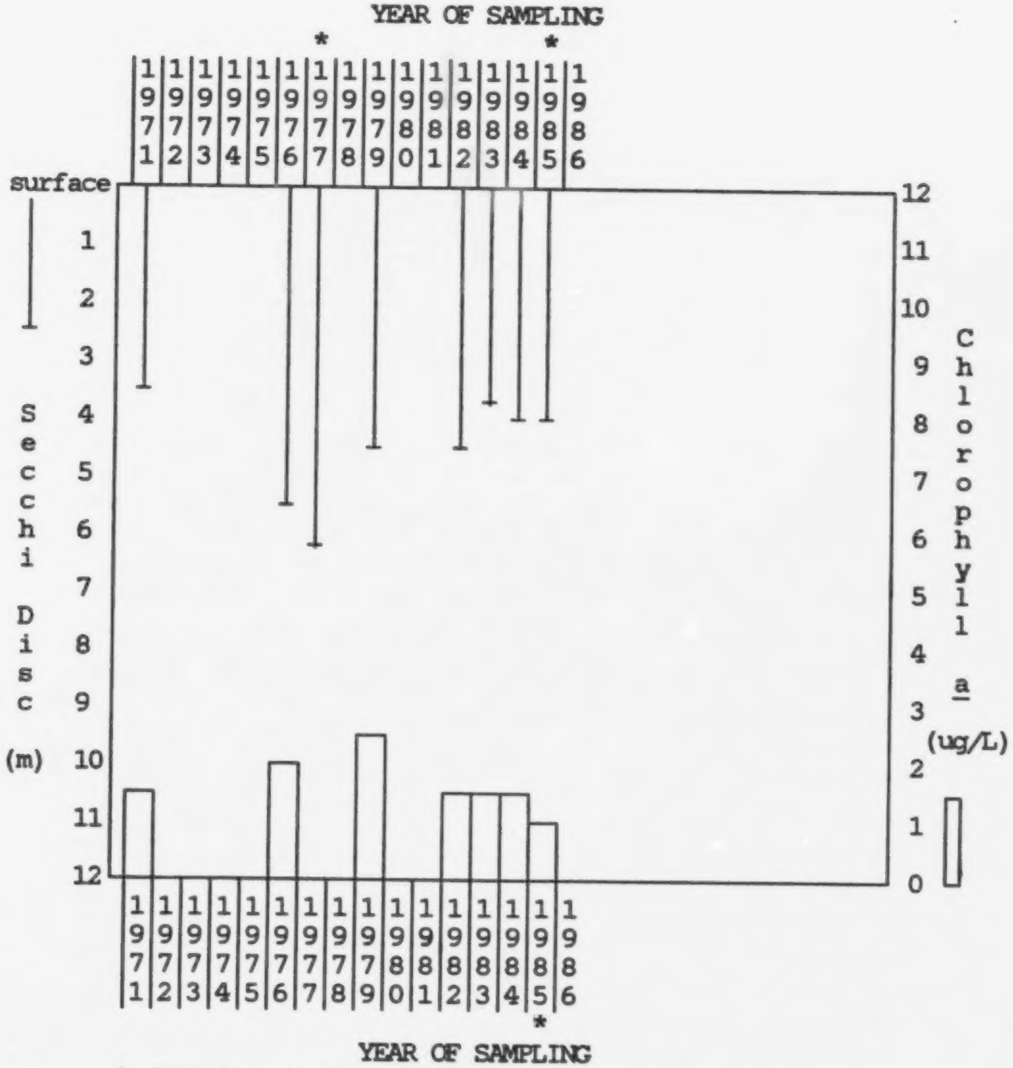


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Go Home Lake (North station) from 1971 to 1985. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* based on 4 or 5 results.

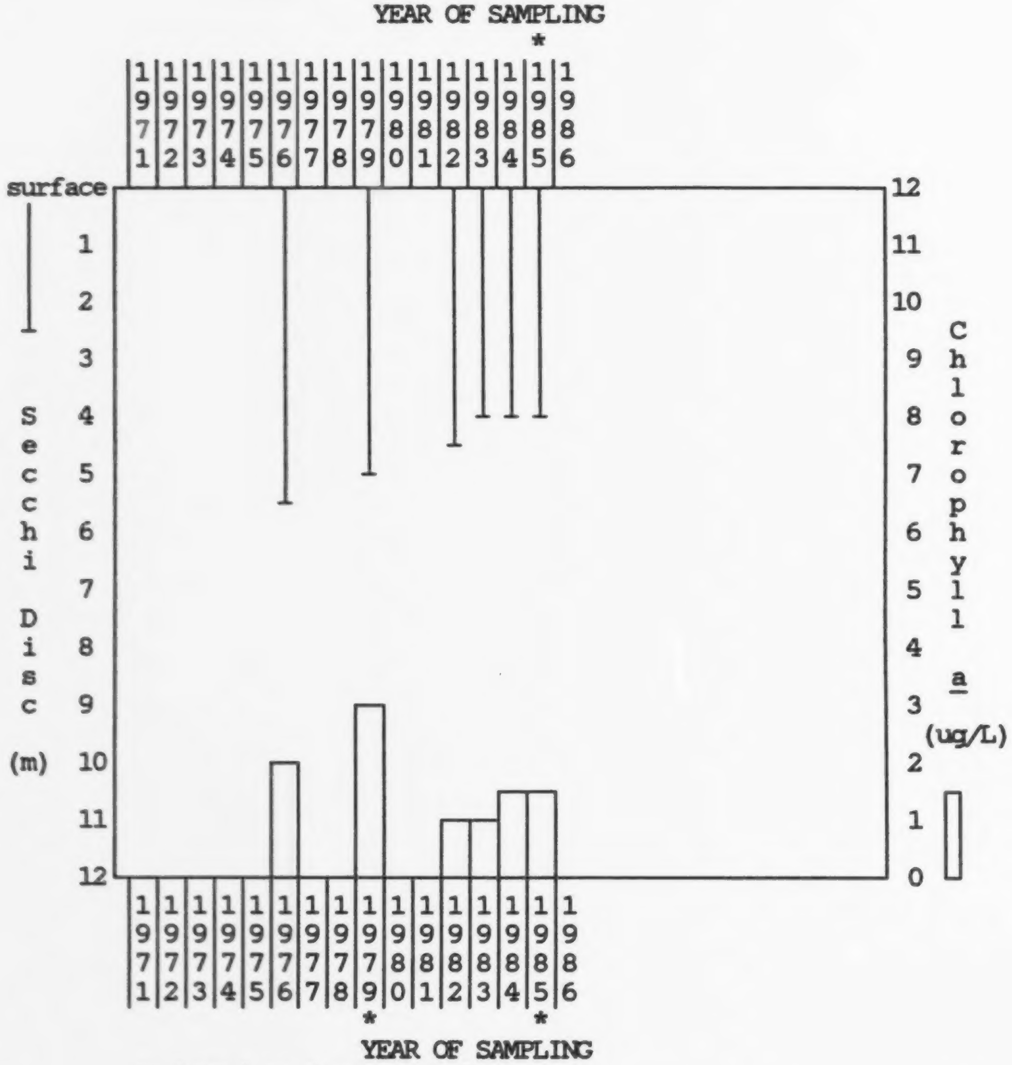
Six years of reliable seasonal data has been collected for the North station of Go Home Lake.

These results indicate no overall change in water quality, however, the degree of water transparency has been variable with average readings ranging from moderately low to high.

Densities of suspended algae have generally been low.

We hope that sampling continues in 1986 with increased frequency in order to maintain the record of reliable results from this station.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Go Home Lake (South station) from 1976 to 1985. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* based on 4 or 5 results

Since 1976, 6 years of data have been collected at the South station of Go Home Lake.

The degree of water clarity has decreased from high in 1976 and 1977 to moderately high from 1979 to 1985.

Densities of suspended algae have been low since 1981 so the reason for the decreased water clarity is not apparent.

We hope that sampling continues in 1986 at this station to monitor water quality changes over the long-term.

Gull Lake

Muskoka Ward
Town of Gravenhurst

District Municipality of
Muskoka

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Gull Lake in 1985

Station	Lower Gull	
Date	S.D.	Chl.a
May 26	3.8	L 0.9
June 18	4.0	1.6
July 1	5.8	1.4
Aug 15	3.1	1.6
Aug 25	3.0	2.5
	3.9	L 1.6

L - less than

Gull Lake was sampled on 5 occasions in 1985.
Secchi disc readings ranged from 3.0 to 5.8 m and averaged 3.9 m indicating moderately clear water.
Chlorophyll a concentrations ranged from less than 0.9 to 2.5 ug/L and averaged less than 1.6 ug/L indicating low densities of suspended algae.
Water quality in Gull Lake was good, indicative of a lake borderline between moderately enriched and unenriched.

Figure 1: The relationship between Secchi disc and chlorophyll a for Gull Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means except for Gull Lake.

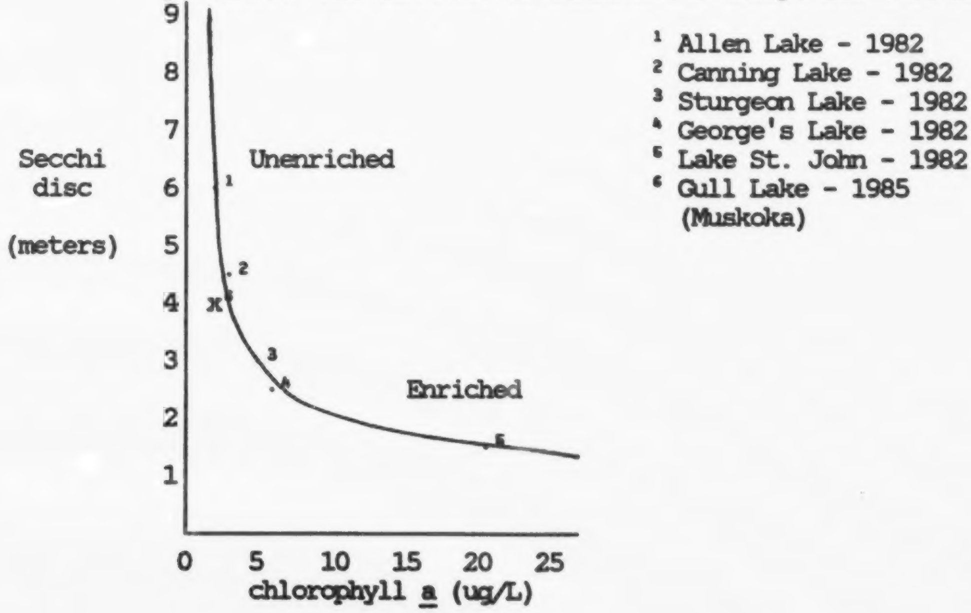
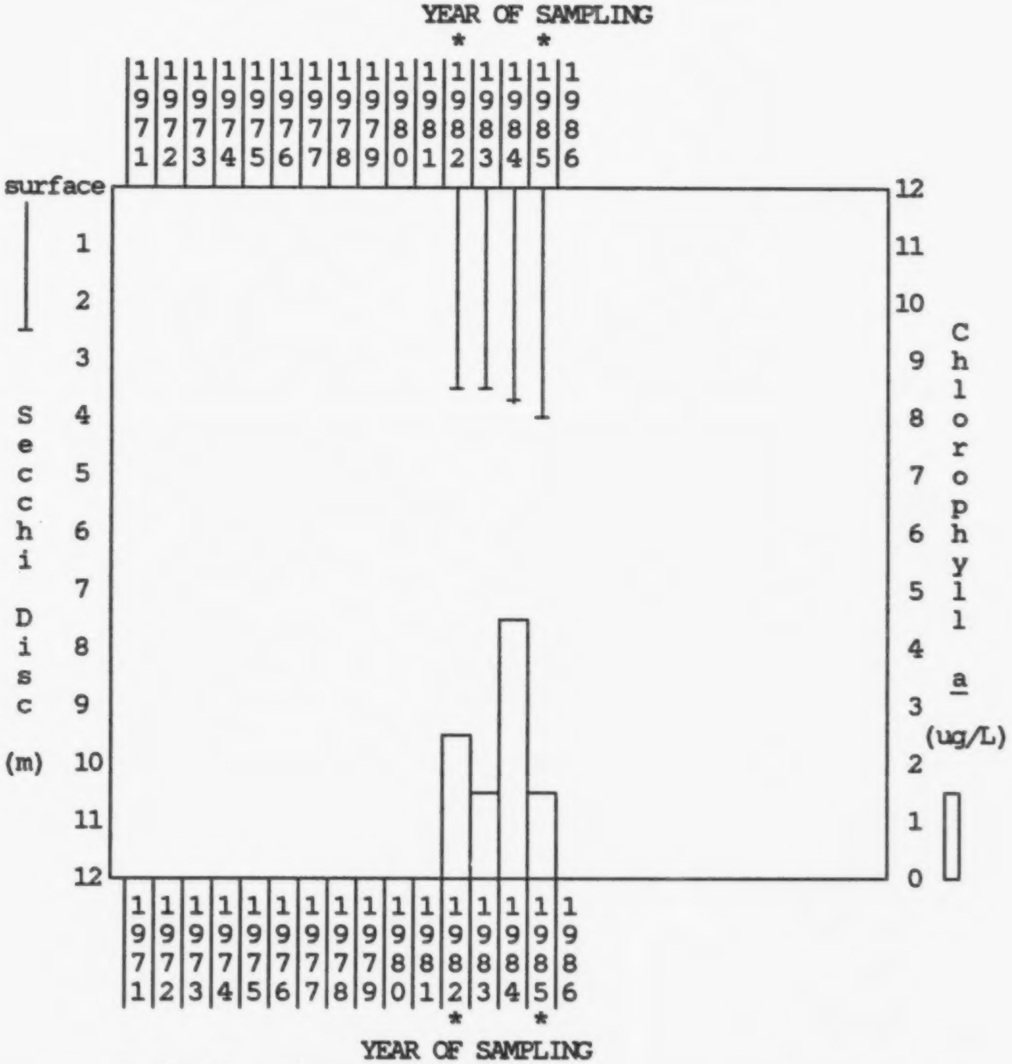


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Gull Lake (Lower station) in Muskoka from 1983 and 1985. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results were required for graphing.



* based on 4 or 5 results

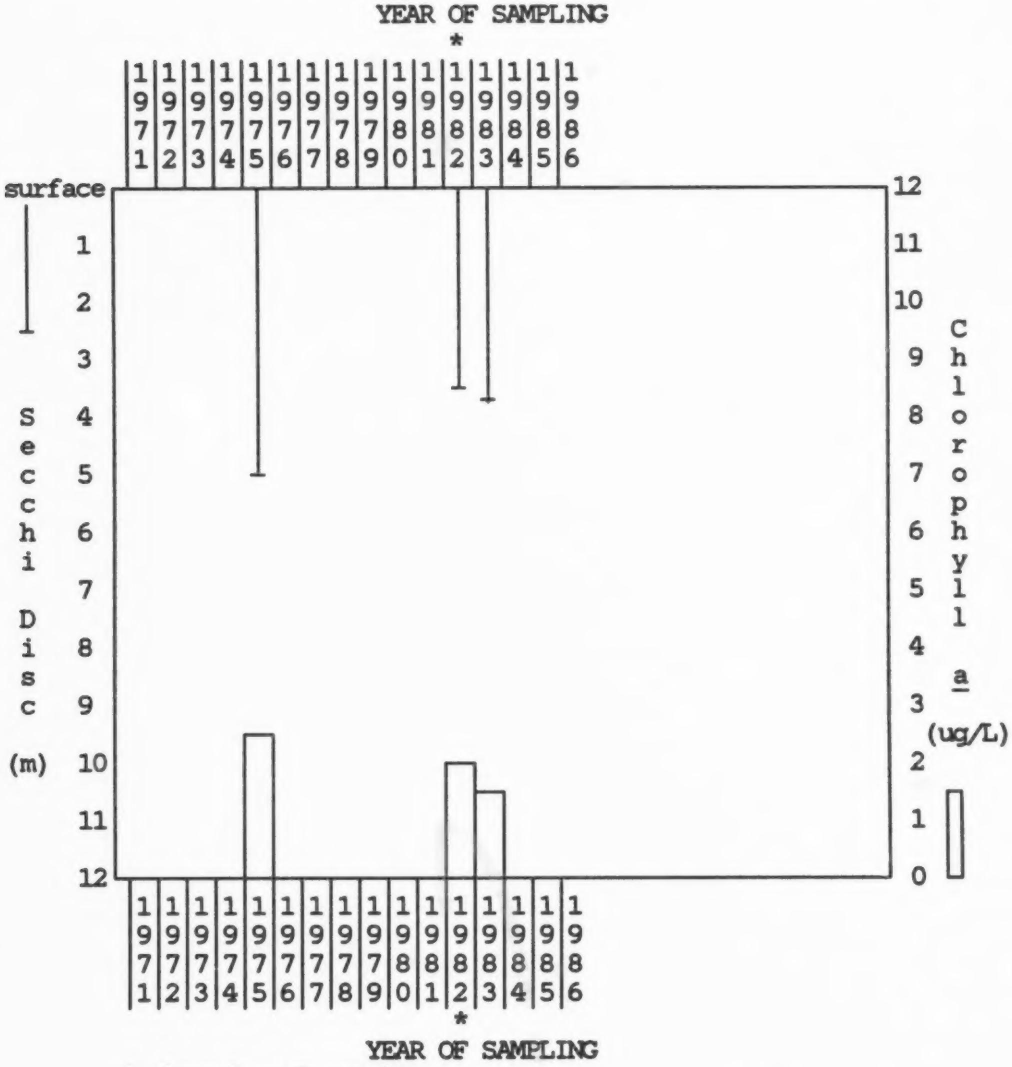
We now have 4 years of data for Gull Lake (Lower Station) in Muskoka. The degree of water clarity has been moderately low but has increased slightly from 1982 to 1985.

Densities of suspended algae have been variable ranging from low to high for the period of record.

No overall change in water quality has been observed in Gull Lake at this station since 1982.

We hope that sampling continues in 1986 in order to maintain a continuous record of water quality for this location.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Gull Lake (Upper station) in Muskoka from 1975 to 1983. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results were required for graphing.



* based on 5 results

Three years of data have been collected so far at the Upper station on Gull Lake in Muskoka.

The degree of water clarity was high in 1975 and moderate in 1982 and 1983. No sampling was done at this station in 1985.

Densities of suspended algae were moderately low in 1975 and low in 1982 and 1983. There has been no real change in water quality at this location for the period of record. Water quality here is borderline between moderately enriched and unenriched.

Haliburton Lake
Harburn Township
County of Haliburton

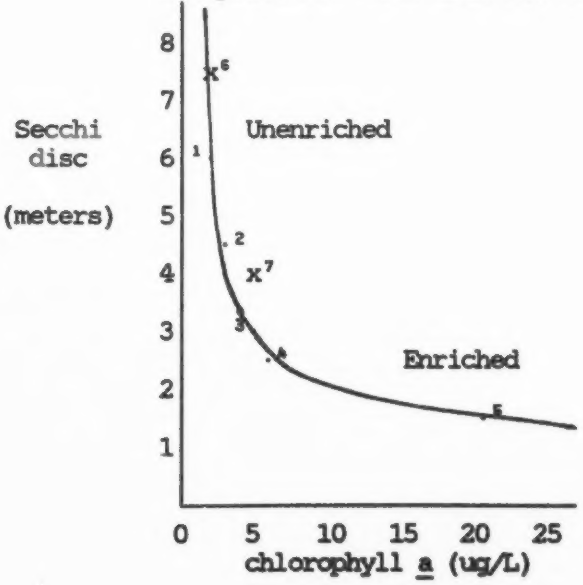
Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Haliburton Lake in 1985

Station Date	Main- North S.D.	 Chl.a	South Bay S.D.	 Chl.a
May 26	6.86	UR	4.12	2.0
June 9	8.6	2.5	4.3	UR
June 15	7.9	1.9	4.0	4.6
June 23	6.3	5.6	3.7?	2.1
June 30	6.75	1.8	2.37?	5.7
July 27	7.5	2.2	4.5	7.8
Aug 4	7.0	1.9	4.5	6.6
Aug 11	6.75	1.2	3.75	2.0
Aug 24	6.75	2.5	4.25	7.8
	-----	-----	-----	-----
	7.2	2.5	3.9	4.8

UR - unreliable result
? - Secchi disc reading not 1/2 chlorophyll sample depth

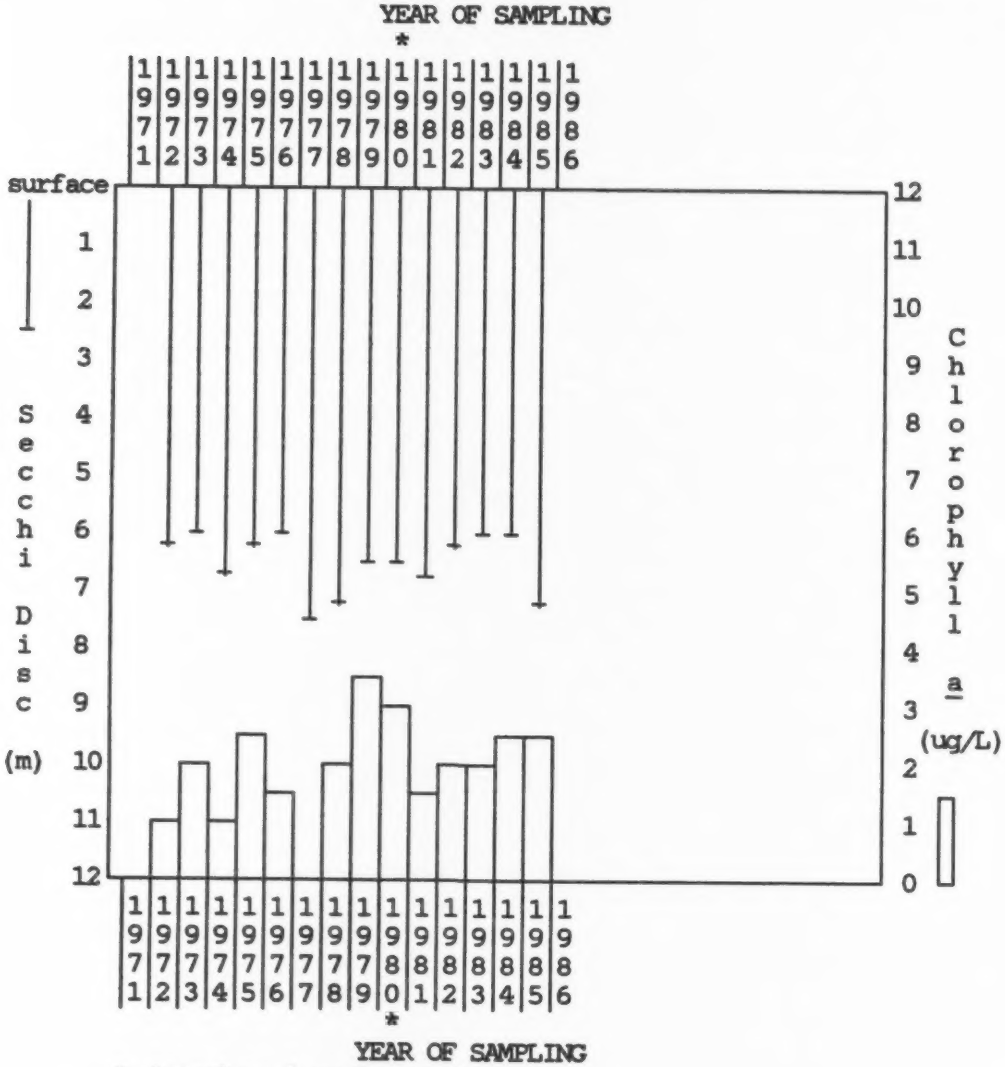
In 1985 a very good sampling program was done on Haliburton Lake with sampling on 9 dates from May 26 to Aug. 24. At the North station, the Secchi disc readings ranged from 6.3 to 8.6 m and averaged 7.2 m indicating a high degree of water clarity. Chlorophyll a concentrations ranged from 1.2 to 5.6 ug/L and averaged 2.5 ug/L, indicating low densities of suspended algae for most of the sampling period. Based on these results, the water quality at the North station indicated unenriched conditions with 1 unusually high chlorophyll a reading.
In South Bay, Secchi disc readings ranged from 2.37 to 4.5 m and averaged 3.9 m indicating a moderate degree of water clarity.
Chlorophyll a concentrations ranged from 2.0 to 7.8 ug/L and averaged 4.8 ug/L indicating high densities of suspended algae. Based on these results, South Bay would be considered moderately enriched to enriched.

Figure 1: The relationship between Secchi disc and chlorophyll a for Haliburton Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means.



1 Allen Lake - 1982
2 Canning Lake - 1982
3 Sturgeon Lake - 1982
4 George's Lake - 1982
5 Lake St. John - 1982
6 Haliburton Lake - 1985 Main
7 South Bay

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Haliburton Lake (Main station) from 1972 to 1985. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* based on 4 or 5 results

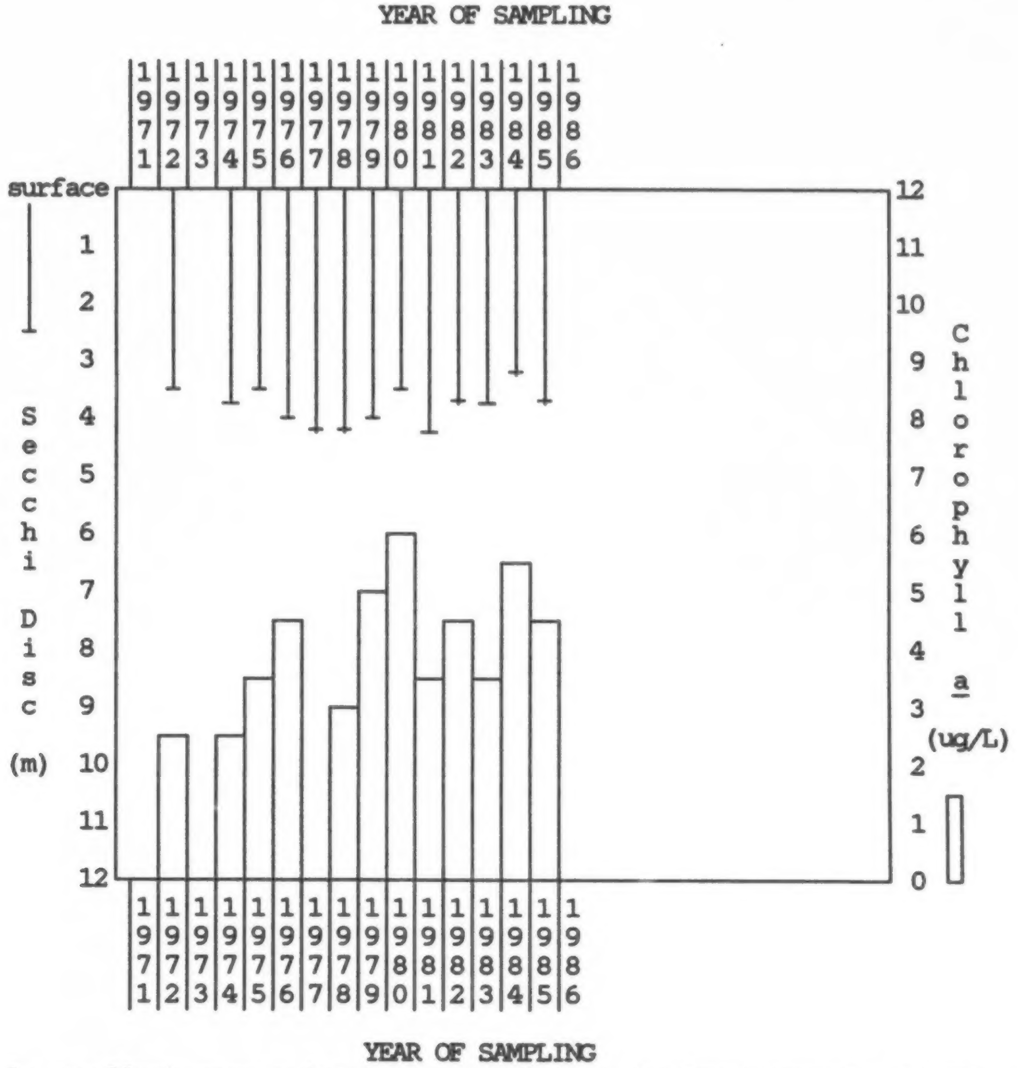
An excellent historical record of water quality information has been established for Haliburton Lake (Main station) with 13 years of data. The degree of water clarity has been consistently high ranging from 6 to 7.5 m with no overall changes for the period of record.

Densities of suspended algae have been more variable with low densities observed for most of the period of record. In 1979 and 1980 the highest densities of suspended algae occurred.

Water quality of the main basin of Haliburton Lake continues to be excellent with no overall change in water quality for the period of record.

We hope that your excellent participation in this program continues in 1986. A detailed water quality survey of Haliburton Lake will be done by the Ministry of the Environment in 1986.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Haliburton Lake (South Bay) from 1972 to 1985. Seasonal mean data (more than 6 sampling dates) only.



YEAR OF SAMPLING

An excellent program has been conducted on the South Bay of Haliburton with 13 years of reliable seasonal average data.

The degree of water clarity has been moderately low for the period of record with no overall trends to indicate a change in water quality. Densities of suspended algae have been variable, ranging from moderately low in 1972 and 1974 to high densities in 1979, 1980, 1984 and 1985. Chlorophyll a concentrations appear to have increased over the period of record, indicating increasing enrichment.

We hope your participation in this program continues in 1986. A detailed water quality survey of South Bay will be done by the Ministry of the Environment in 1986.

Halls Lake

Stanhope Township

County of Haliburton

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Halls Lake in 1985

Station Date	North End S.D.	 Chl.a
June 30 *	10.5	L 0.6 **
" *	10.5	L 0.7 **
Aug 4	7.5	L 0.6
"	7.5	L 0.7
Aug 12	8.0	1.2
Aug 24 *	7.5	2.0
Sept 22	7.0	1.5
Oct 14	6.0	2.1
	-----	-----
	8.1	L 1.2
	-----	-----

L - less than
* - date not given
** - chlorophyll sample not taken through a depth equal to twice Secchi disc reading

A good program was done on Halls Lake in 1985 with sampling on 6 occasions. Unnecessary duplicate sampling was done on June 30 and Aug. 4.

Secchi disc readings ranged from 6.0 to 10.5 m and averaged 8.1 m indicating a high degree of water clarity.

Chlorophyll a concentrations ranged from less than 0.6 ug/L to 2.1 ug/l and averaged less than 1.2 ug/L, indicating low densities of suspended algae.

Based on the 1985 results Halls Lake would be considered unenriched with excellent water quality.

Please be sure to enter sampling dates on 1986 sample submission forms.

Figure 1: The relationship between Secchi disc and chlorophyll a for Hall Lake in 1985 and a number of recreational lakes in the province All data are seasonal means.

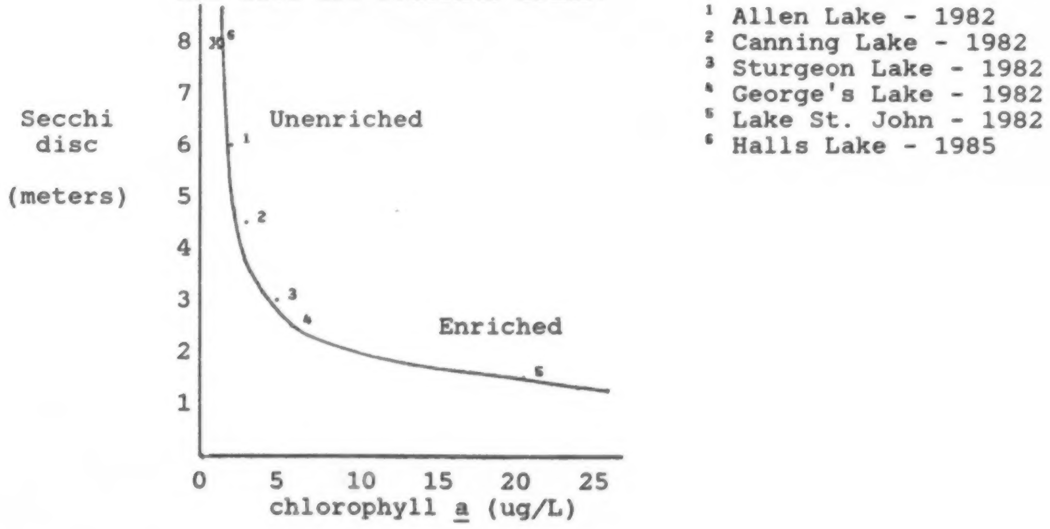
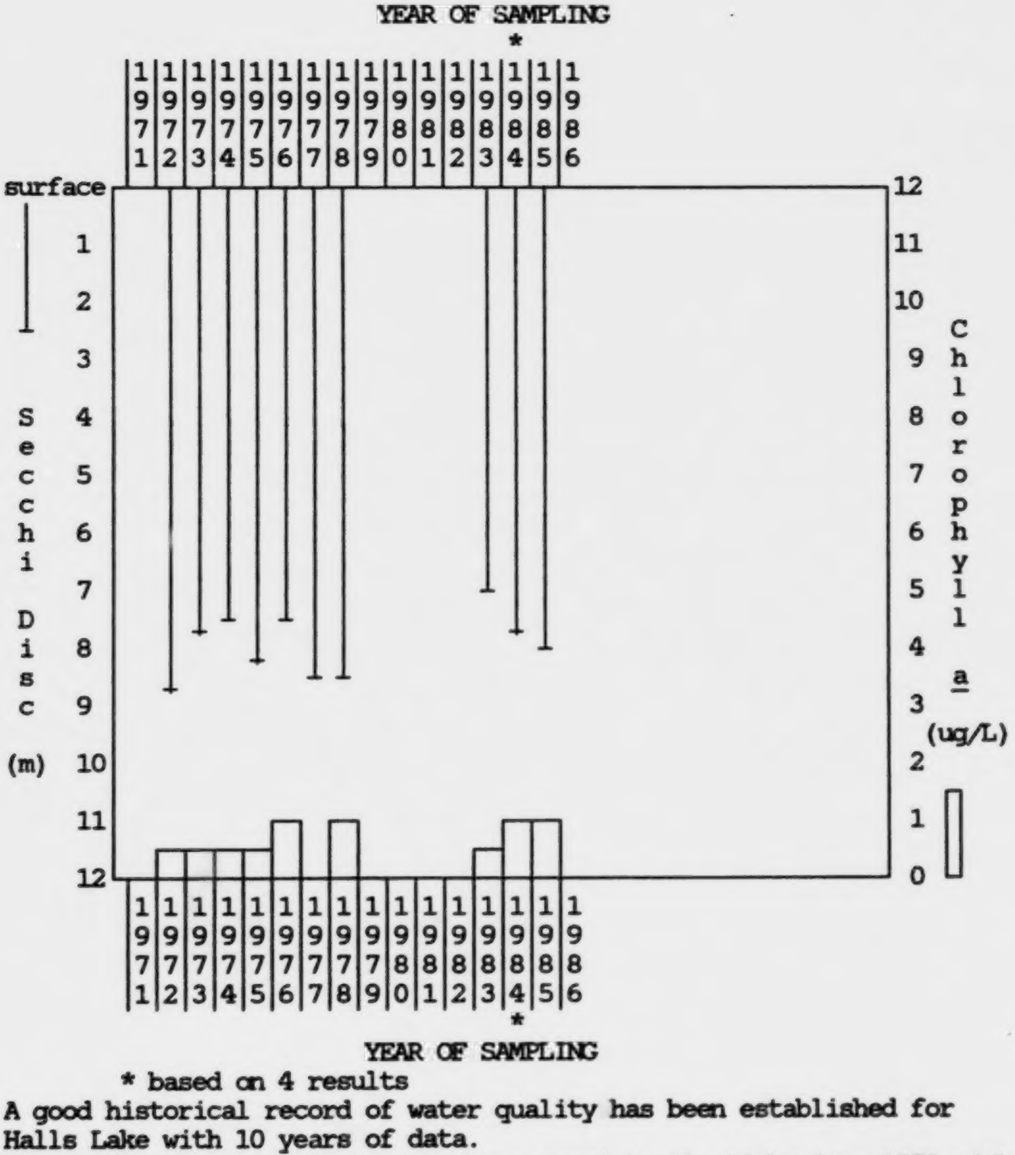


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Halls Lake from 1972 to 1985. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* based on 4 results

A good historical record of water quality has been established for Halls Lake with 10 years of data.

The degree of water clarity has been consistently high since 1972 with Secchi disc readings ranging from 7 to 9 m.

Densities of suspended algae have been consistently low for the period of record.

Water quality of Halls Lake continues to be excellent.

We hope your excellent participation in Self Help continues in 1986.

Harp Lake

Chaffey Ward
Town of Huntsville

District Municipality of
Muskoka

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Harp Lake in 1985

Station	Centre	
Date	S.D.	Chl.a
July 1	4.3	2.7
Aug 6	2.8	2.9
Aug 25	3.1	4.3
Sept 8	2.3	4.7
Sept 15	2.6	4.0
Oct 14	3.2	4.7
	3.1	3.9

In 1985 a good program was done on Harp Lake with sampling done on 6 occasions. Secchi disc readings ranged from 2.3 to 4.3 m and averaged 3.1 m indicating a moderately low degree of water clarity. Chlorophyll a concentrations ranged from 2.7 to 4.7 ug/L and averaged 3.9 ug/L indicating moderately high densities of suspended algae.

Based on the 1985 results, Harp Lake would be considered moderately enriched.

Figure 1: The relationship between Secchi disc and chlorophyll a for Harp Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means.

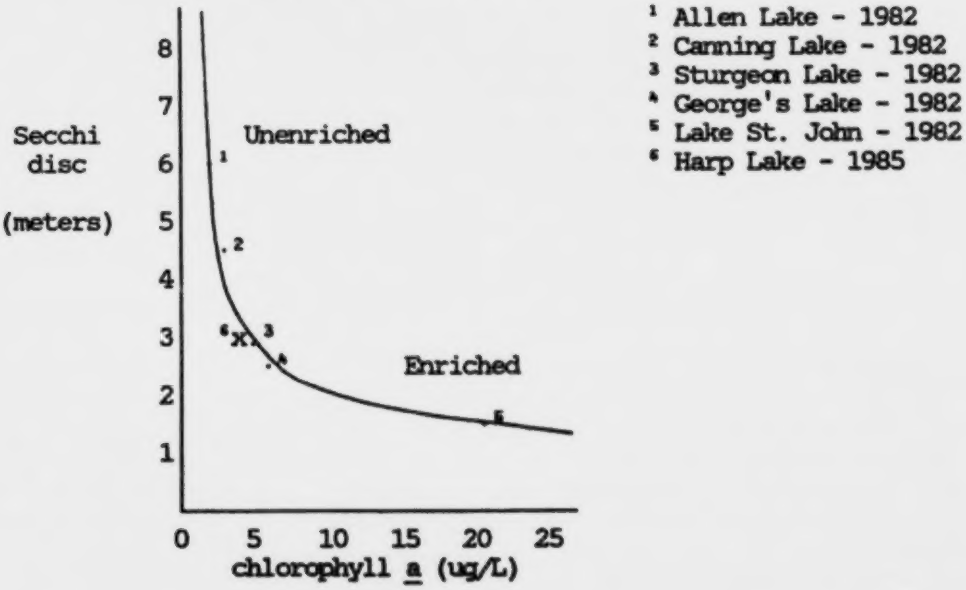
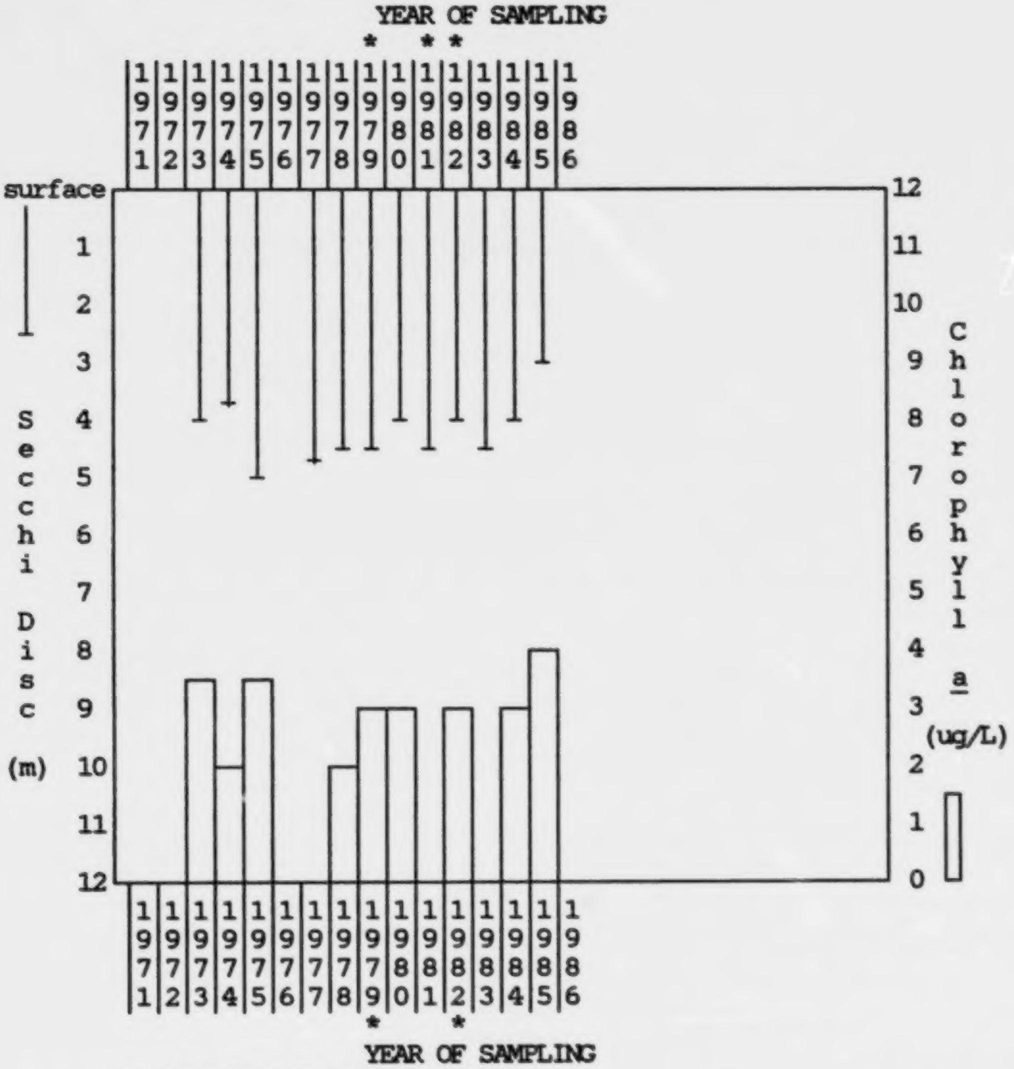


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Harp Lake from 1973 to 1985.
Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* based on 4 or 5 results

A good sampling program has been done on Harp Lake with 12 years of data collected to date.

The degree of water clarity has been moderately high for most of the period of record with Secchi disc readings in the range of 3 to 5 m. The lowest Secchi disc reading occurred in 1985, corresponding with the highest chlorophyll a concentration.

Densities of suspended algae for most of the period of record have been moderate.

There has been no overall change in the water quality of Harp Lake since 1973. We hope that you continue in the Self Help Program in 1986.

Head Lake

Laxton & Digby Townships

County of Victoria

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Head Lake in 1985

Station	Main	
Date	S.D.	Chl.a
May 20	2.75	2.6
June 9	2.75	2.7
June 23	2.75	2.1
July 1	3.25	1.6
July 28	2.5	3.2
Aug 5	2.5	2.8
Aug 11	2.5	2.6
Aug 18	2.0	5.9
Aug 25	1.75	4.8
	2.5	3.0

Once again, an excellent sampling program was done on Head Lake with sampling on 9 occasions from May 20 to Aug.25.
Secchi disc readings were low, ranging from 1.75 to 3.25 m and averaging 2.5 m.
Chlorophyll a concentrations were moderately low for most of the sampling period with higher densities of suspended algae observed in late August.

Based on the 1985 results, Head Lake would be considered moderately enriched with lower degree of water clarity than usual.

Figure 1: The relationship between Secchi disc and chlorophyll a for Head Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means.

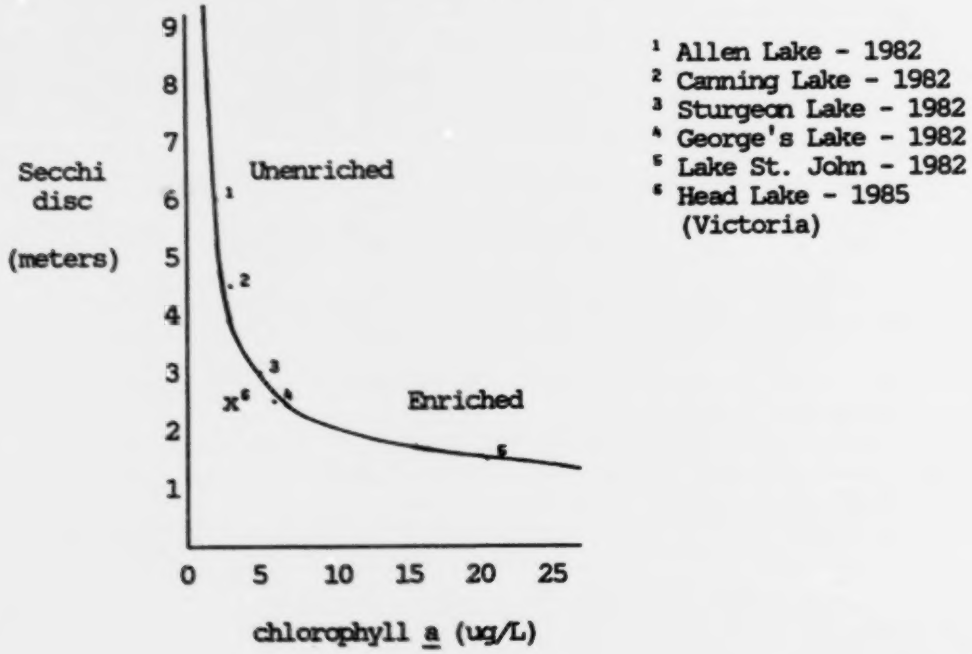
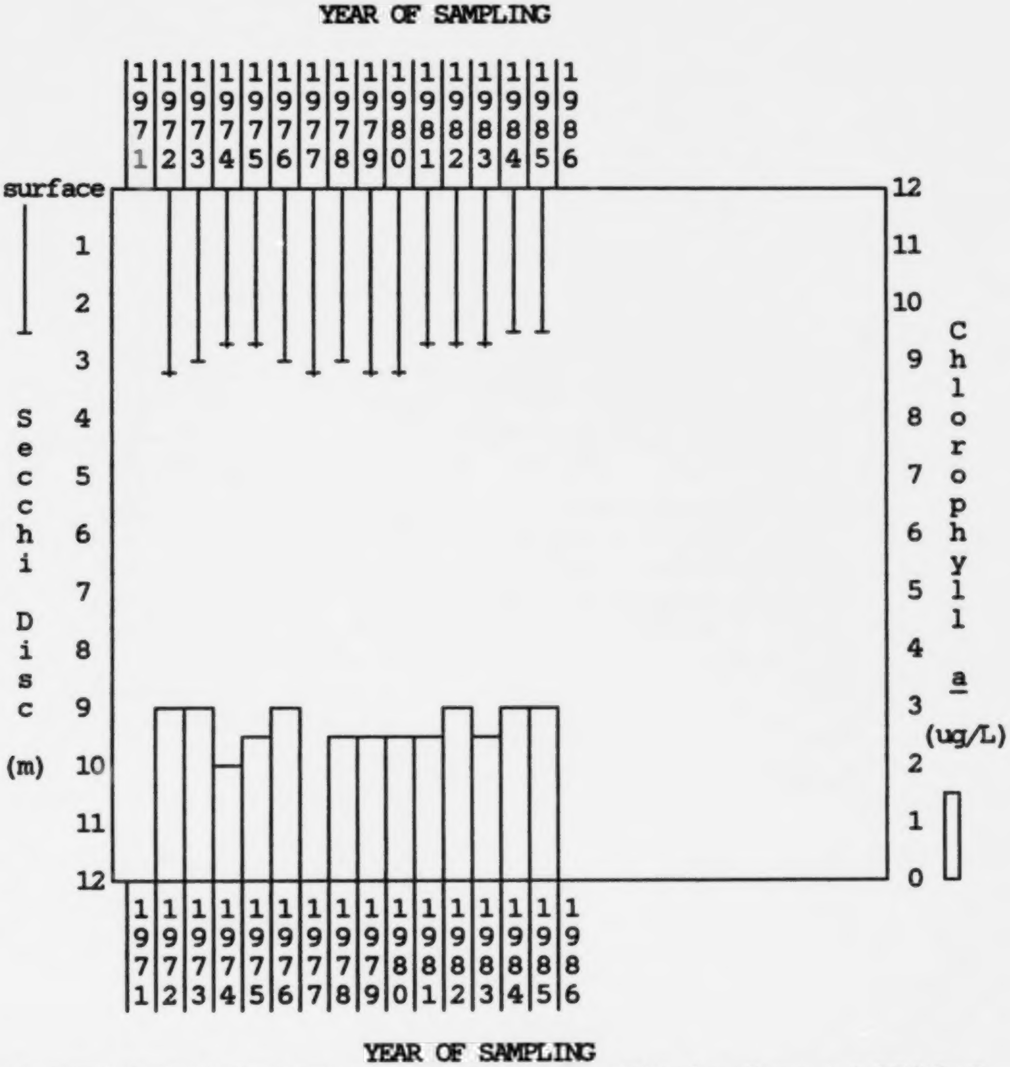


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Head Lake in Victoria from 1972 to 1985. Seasonal mean data (more than 6 sampling dates) only.



An excellent historical record of water quality has been established for Head Lake in Victoria County with 14 years of reliable seasonal average data.

The Secchi disc readings have consistently ranged between 2.5 and 3.5 m indicating a low degree of water clarity.

Densities of suspended algae have been moderately low for the period of record. There has been no overall change in the water quality of Head Lake since 1972.

We hope that your excellent participation in this program continues in 1986.

Horseshoe (Elsie) Lake

Minden Township

County of Haliburton

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Horseshoe Lake in 1985

Station	North Side	
Date	S.D.	Chl.a
July 1	6.1	1.7
July 28	6.3	1.2
Aug 11	6.3	3.2
Aug 25	5.3	4.5
Sept 8	5.3	L 0.8
	5.9	L 2.3

In 1985, Horseshoe Lake was sampled on 5 occasions. The Secchi disc readings were high ranging from 5.3 to 6.3 m and averaging 5.9 m, indicating a high degree of water clarity. Chlorophyll a concentrations were variable ranging from less than 0.8 to 4.5 ug/L and averaged less than 2.3 ug/L. These results indicated that higher densities of algae were present in late August. Horseshoe Lake had good water quality in 1985, borderline between moderately enriched and unenriched.

Figure 1: The relationship between Secchi disc and chlorophyll a for Horseshoe Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means.

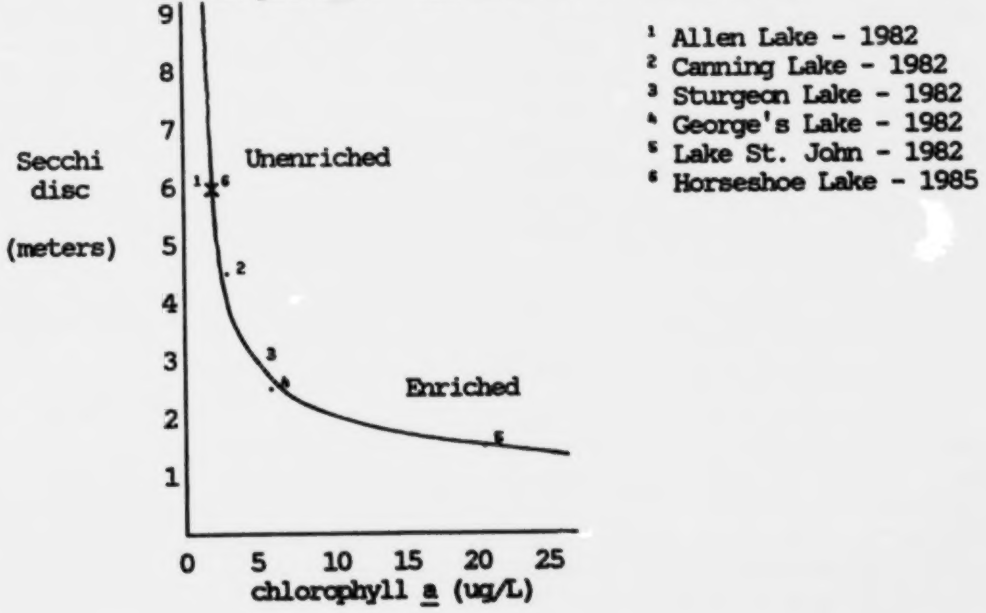
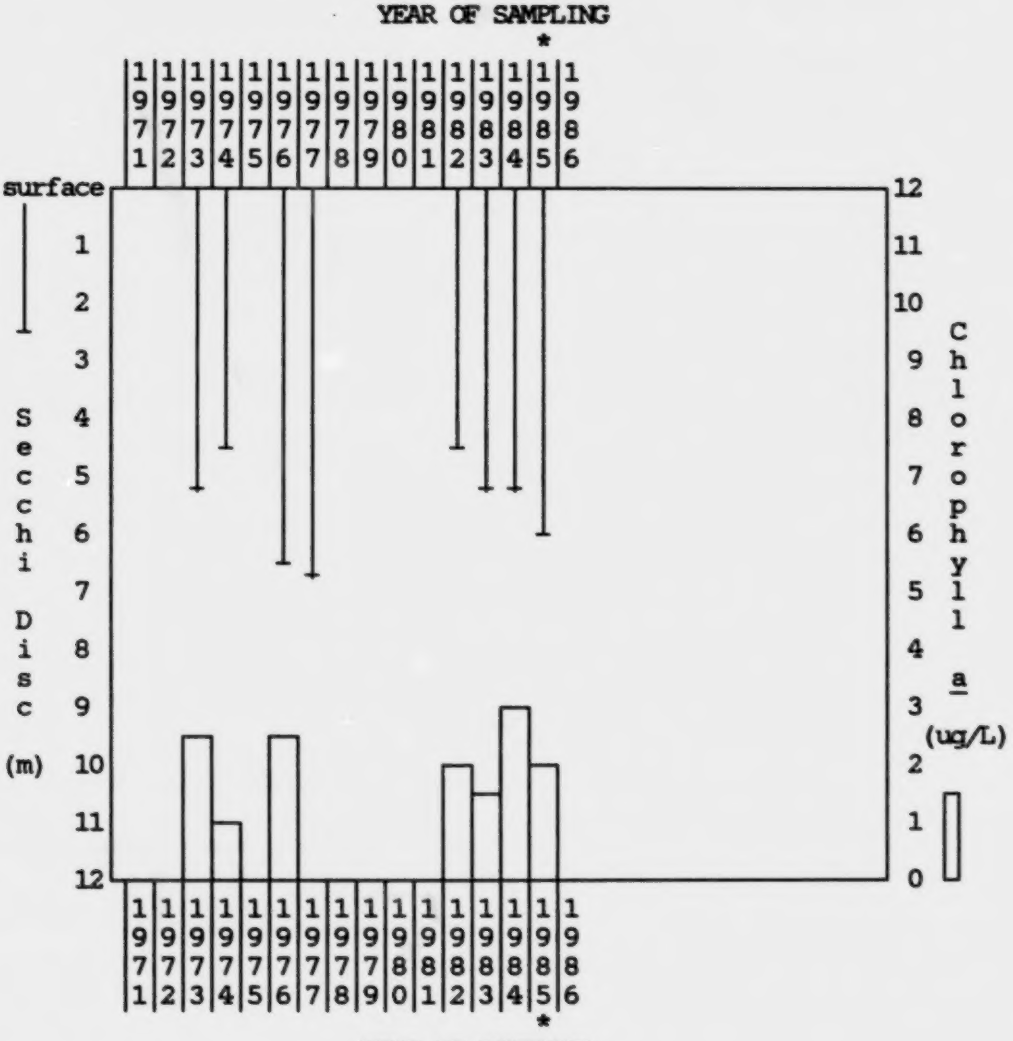


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll *a* (ug/L) from Horseshoe Lake from 1973 to 1985. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* based on 5 results

We now have 8 years of data for Horseshoe Lake.

The degree of water clarity has been high for most of the period of record but in 1974 and 1982 it was moderately high.

Densities of suspended algae in this lake have been low for most of the period of record with moderately low densities observed in 1973, 1974 and 1984.

There has been no overall change in water quality in Horseshoe Lake since 1973. Water quality continues to be very good.

We hope that you continue to participate in the Self Help Program.

Jack Lake

Burleigh & Methuen Townships

Peterborough County

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Jack Lake in 1985

Station	Brooke's Bay		Sharpe's Bay	
Date	S.D.	Chl.a	S.D.	Chl.a
May 12	2.5	S B	3.5	U R
May 20	- -	- -	3.5	- -
Aug 11	3.75	3.2	3.5	2.2
Sept 8	3.25	3.6	3.75	2.7
Sept 22	3.5	1.6	4.25	2.0
	-----	-----	------	-----
	3.25	2.8	3.7	2.3

S B - sample broken U R - unreliable result

In 1985, Jack Lake was sampled on 5 occasions from May 12 to Sept.22. The water quality at both stations was similar with average Secchi disc readings of 3.25 m in Brooke's Bay and 3.7 m in Sharpe's Bay, indicating a moderately low degree of water clarity.

Average chlorophyll a concentrations were also moderately low at both stations indicating moderate densities of suspended algae.

Based on these results, Jack Lake would be considered moderately enriched.

Figure 1: The relationship between Secchi disc and chlorophyll a for Jack Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means except for Jack Lake.

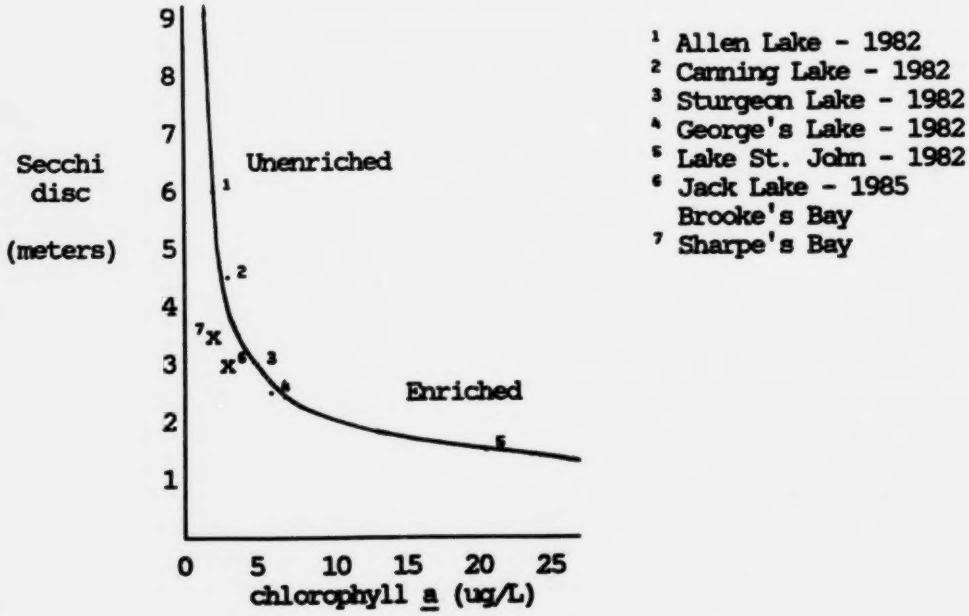
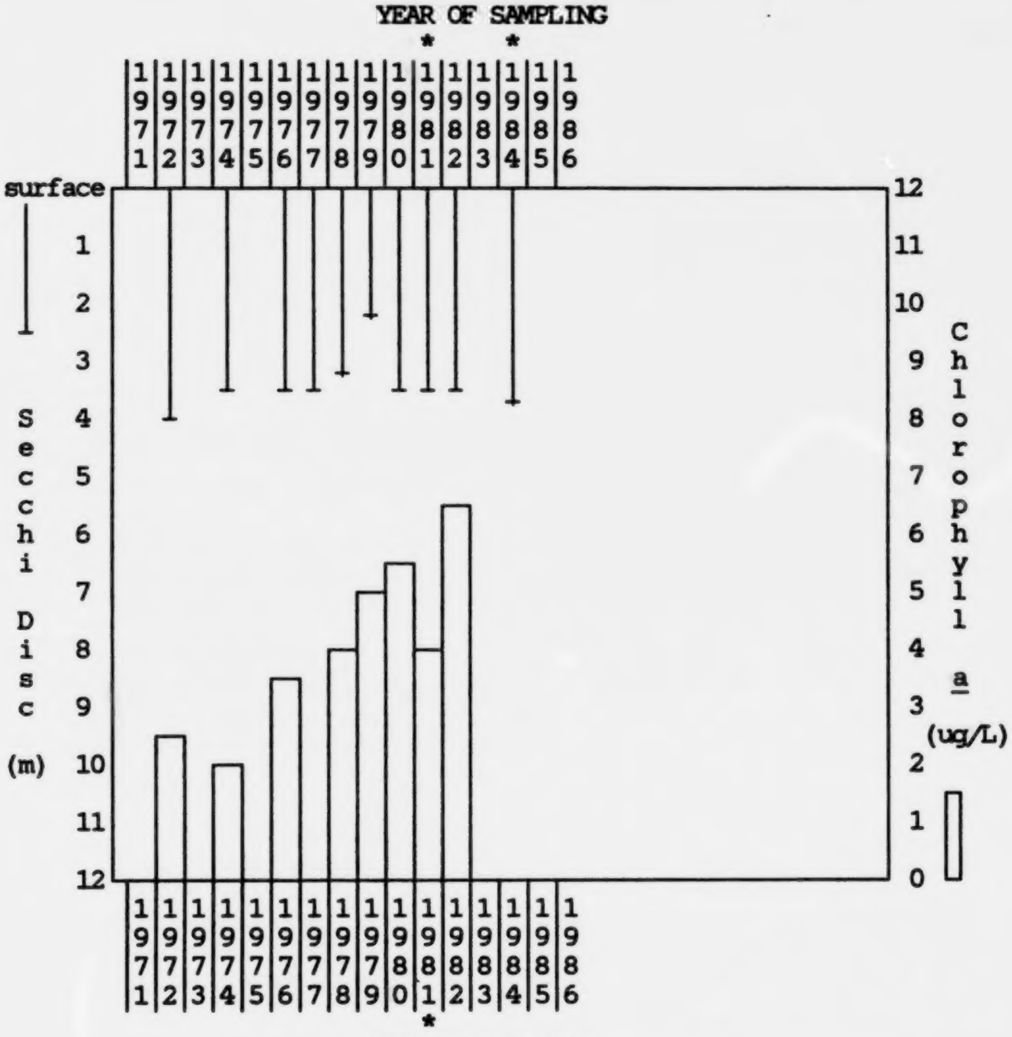


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Jack Lake (Brook's Bay) from 1972 to 1984. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* Based on 4 or 5 samples.

A good historical record of water quality has been established for Brook's Bay of Jack Lake with 10 years of Secchi disc data and 8 years of chlorophyll data.

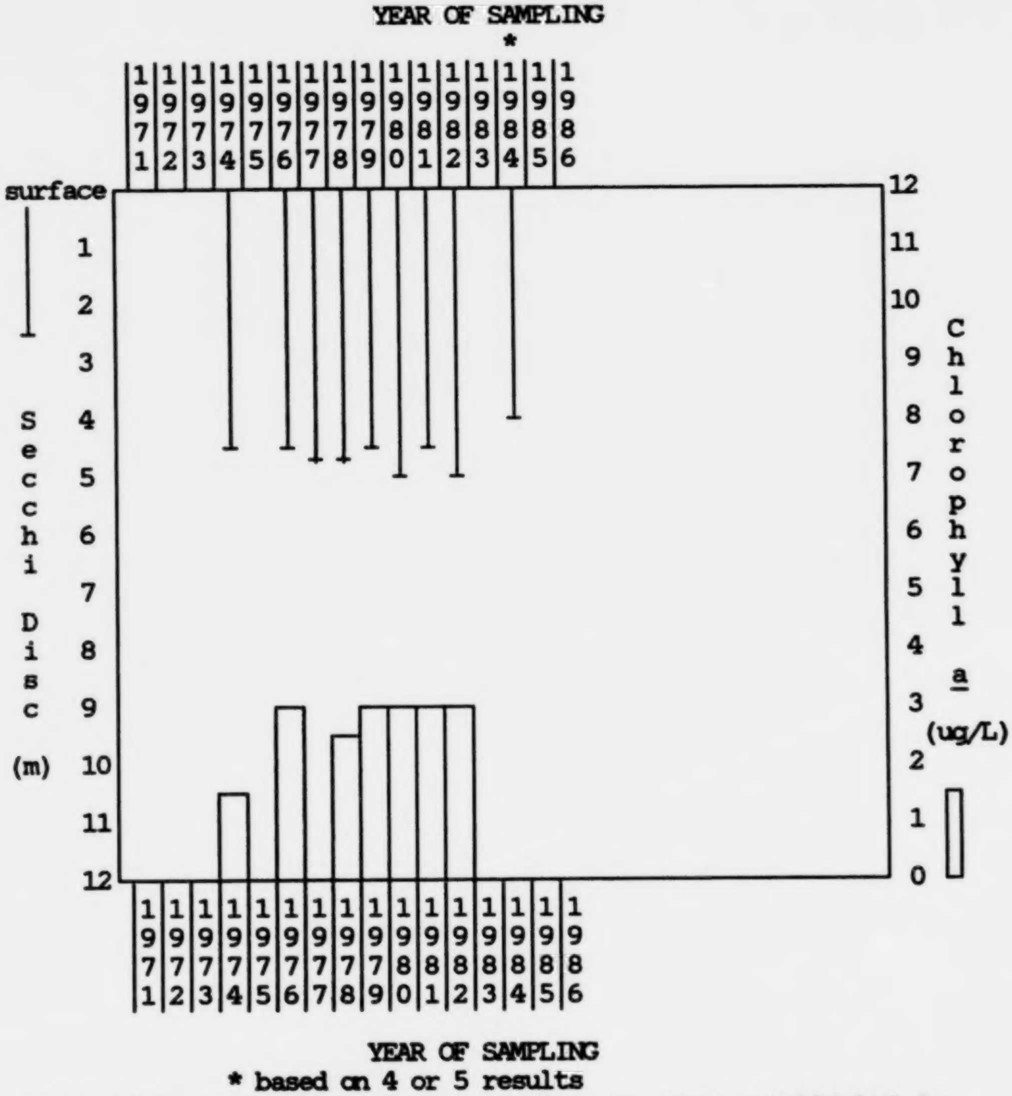
The degree of water clarity has generally been moderately low for the period of record and low in 1979.

The densities of suspended algae have ranged widely from moderately low densities in 1972 and 1974 to high densities in 1982.

There appears to be a trend toward increasing algal densities in Brook's Bay. However, more recent seasonal average chlorophyll a data is required before this could be confirmed.

We hope that sampling frequency is increased if this station is sampled in 1986.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Jack Lake (Sharpe's Bay) 1974 to 1984. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* based on 4 or 5 results

A good historical record of water quality has been established for Jack Lake in Sharpe's Bay with 9 years of Secchi disc data and 7 years of reliable chlorophyll data.

The degree of water clarity has been moderately high consistently since 1974 with Secchi disc readings ranging from 4 to 5 m.

The densities of suspended algae have been moderately low for the period of record with chlorophyll a concentrations ranging from 1.5 to 3 ug/L.

There has been no change in water quality in Sharpe's Bay since 1974.

We hope that your excellent participation in this program continues in 1986.

Kahshe Lake

Morrison Ward
Town of Gravenhurst

District Municipality of
Muskoka

Table 1: Secchi Disc (m) and chlorophyll a (ug/l) data collected from Kahshe Lake in 1985

Station	Kluey's Bay		Main Channel		Windy Cove	
Date	S.D.	Chl.a	S.D.	Chl.a	S.D.	Chl.a
July 1	2.5	2.0	--	--	2.75	2.7
July 21	2.6	2.8	--	--	2.5	3.6
Aug 11	3.2	1.2	--	--	3.5	1.2
Aug 25	2.8	4.4	--	--	3.2	2.8
	2.8	2.6	- -	- -	3.0	2.6

In 1985, sampling was done on 4 occasions in Kahshe Lake.
Secchi disc readings ranged from 2.5 to 3.2 m in Kluey's Bay and averaged 2.8 m, indicating a low degree of water clarity.
In Windy Cove, Secchi disc readings ranged from 2.5 to 3.5 m and averaged 3.0 m indicating moderately low water clarity.
Chlorophyll a concentrations in Kluey's Bay and Windy Cove averaged 2.6 ug/L indicating that moderately low densities of suspended algae were present.
Based on the 1985 results, Kahshe Lake would be considered moderately enriched with a lower than usual degree of water transparency.

Figure 1: The relationship between Secchi disc and chlorophyll a for Kahshe Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means except for Kahshe Lake.

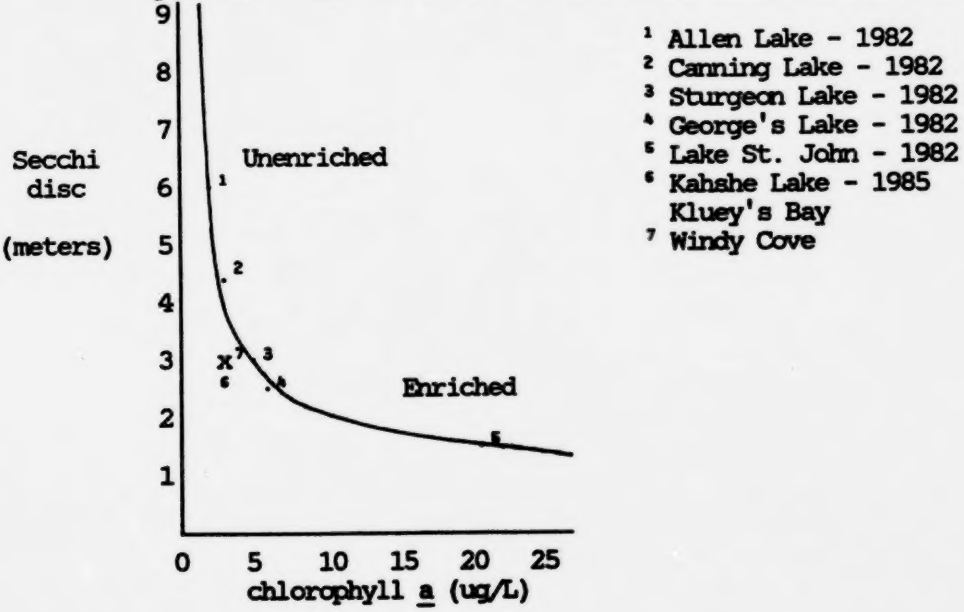
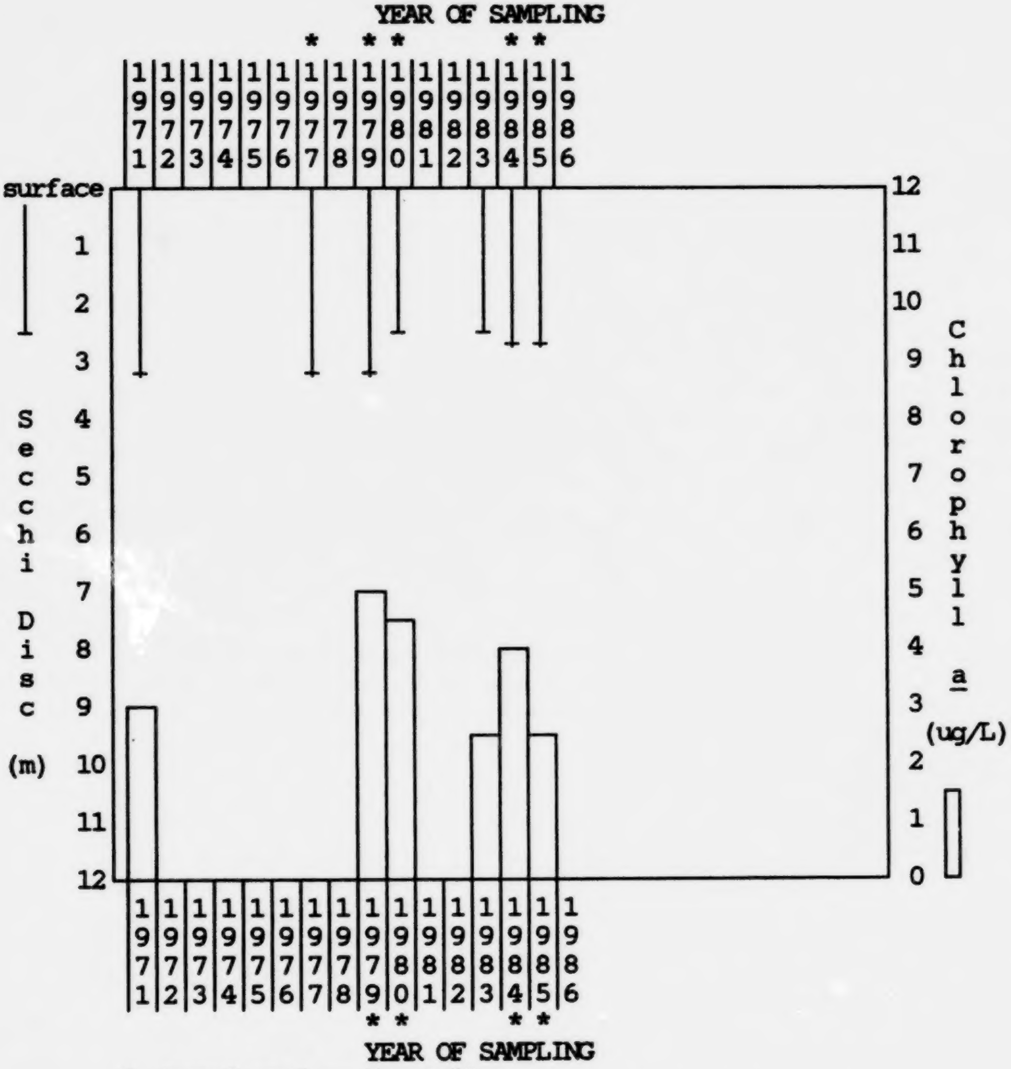


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Kahshe Lake from 1971 (deepest point) to 1985 (Klueys Bay). Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* based on 4 or 5 results

We have 6 or 7 years of data available for Kahshe Lake in Kluey's Bay.

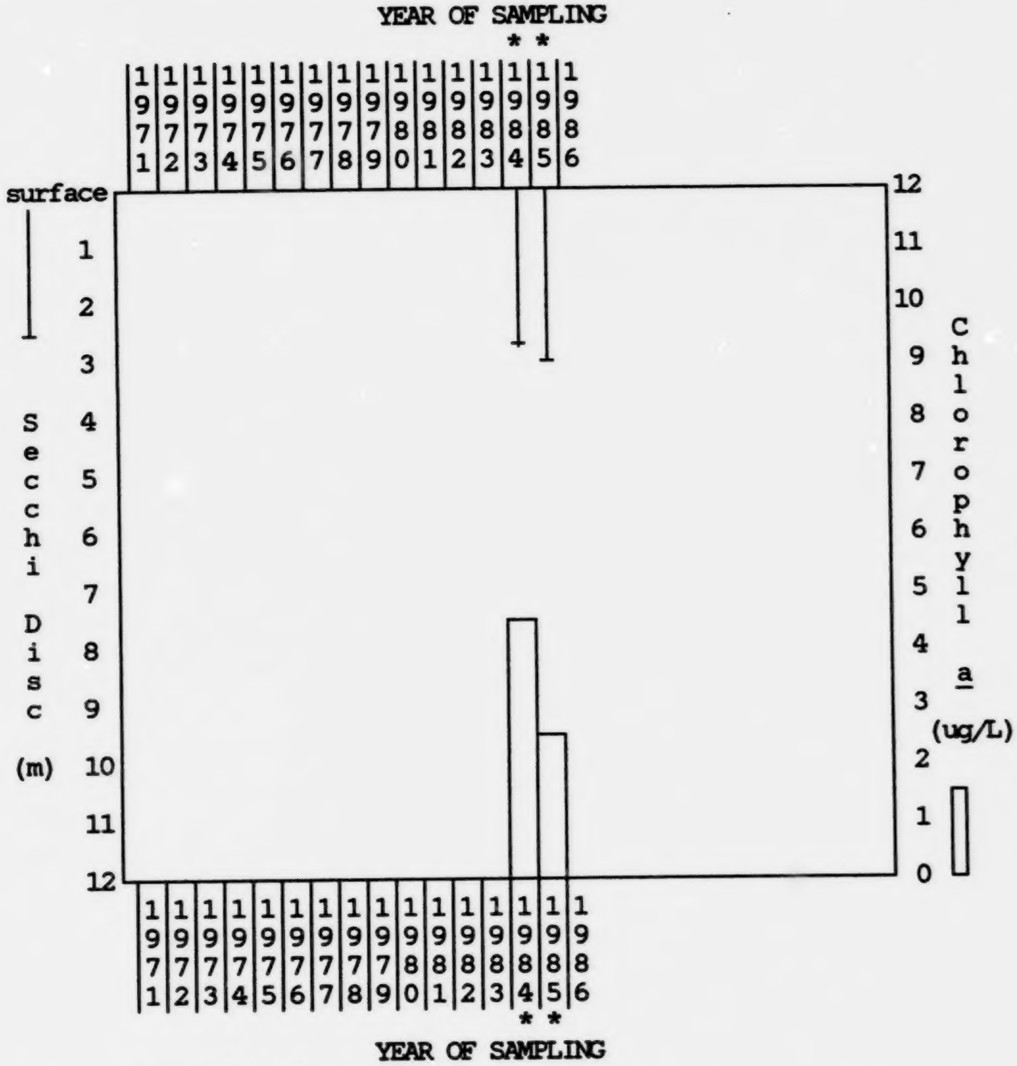
These results indicate that the degree of water clarity has been consistently low for the period of record.

Densities of suspended algae have ranged from moderately low to high.

This is fairly typical for enriched lakes such as Kahshe Lake.

We hope you continue to sample in 1986.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Kahshe Lake (Windy Cove) from 1984 and 1985. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* based on 4 results

We now have 2 years of data available for Windy Cove of Kahshe Lake. We hope that sampling continues in the future in order to establish a historical record of water quality data for this location.

The available results indicate a low degree of water clarity and variable densities of suspended algae, typical of enriched lake conditions.

Kashagawigamog Lake

Dysart & Minden Townships

County of Haliburton

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Kashagawigamog Lake in 1985

Station	South End		Venture Bay	
Date	S.D.	Chl.a	S.D.	Chl.a
July 1	3.0	4.3	NS	NS
July 28	3.5	2.3	4.2	2.5
Aug 5	3.5	1.5	4.3	2.1
Aug 11	3.5	1.8	4.1	2.5
Aug 25	3.0	3.1	4.4	3.0
Sept 2	3.5	2.8	NS	NS
	-----	-----	-----	-----
	3.3	2.6	4.3	2.5

NS - not sampled

In 1985, a good sampling program was done on Kashagawigamog Lake with 6 sampling occasions.
Secchi disc readings at the South station ranged from 3.0 to 3.5 m and averaged 3.3 m, indicating a moderately low degree of water clarity.
In Venture Bay, Secchi disc readings ranged from 4.1 to 4.4 m with no readings given for the first and last sampling dates. The average Secchi disc reading of 4.3 m indicated a slightly higher degree of water transparency in Venture Bay.
Chlorophyll a concentrations at both stations were moderately low indicating moderately low densities of suspended algae.
Kashagawigamog Lake would be considered moderately enriched.

Figure 1: The relationship between Secchi disc and chlorophyll a for Kashagawigamog Lake in 1985 and a number of recreational lakes in the province.

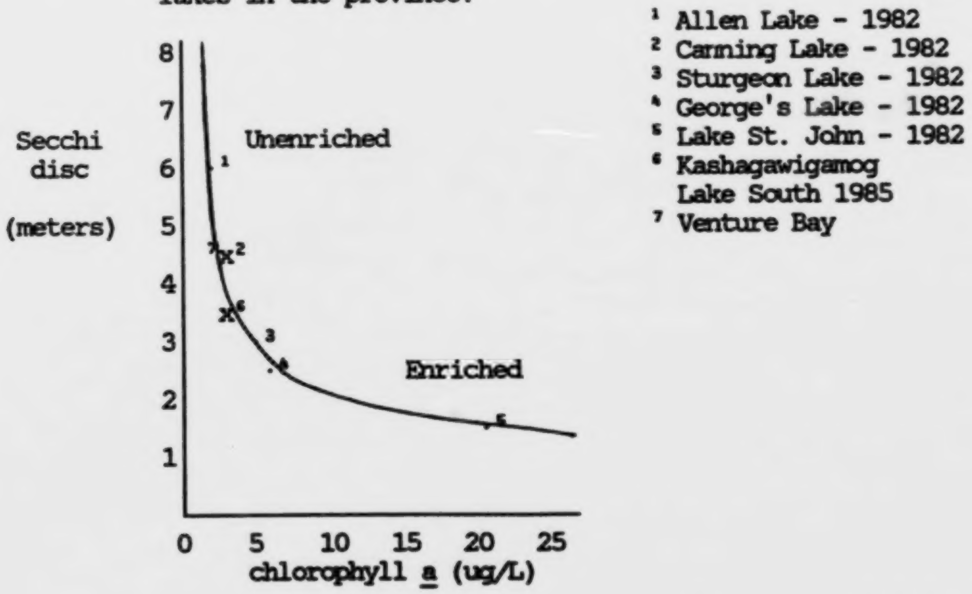
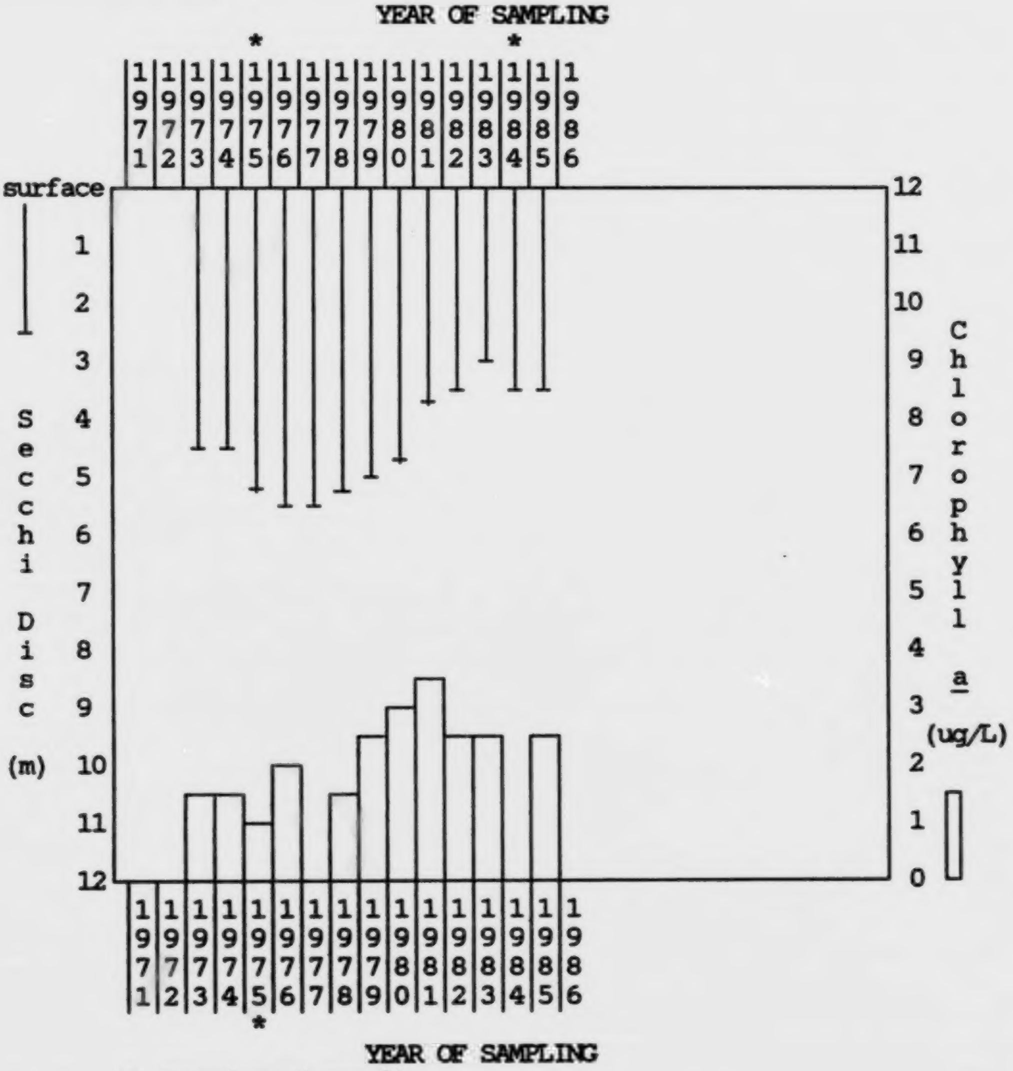


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Kashagawigamog Lake (South station) from 1973 to 1985. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* based on 4 results

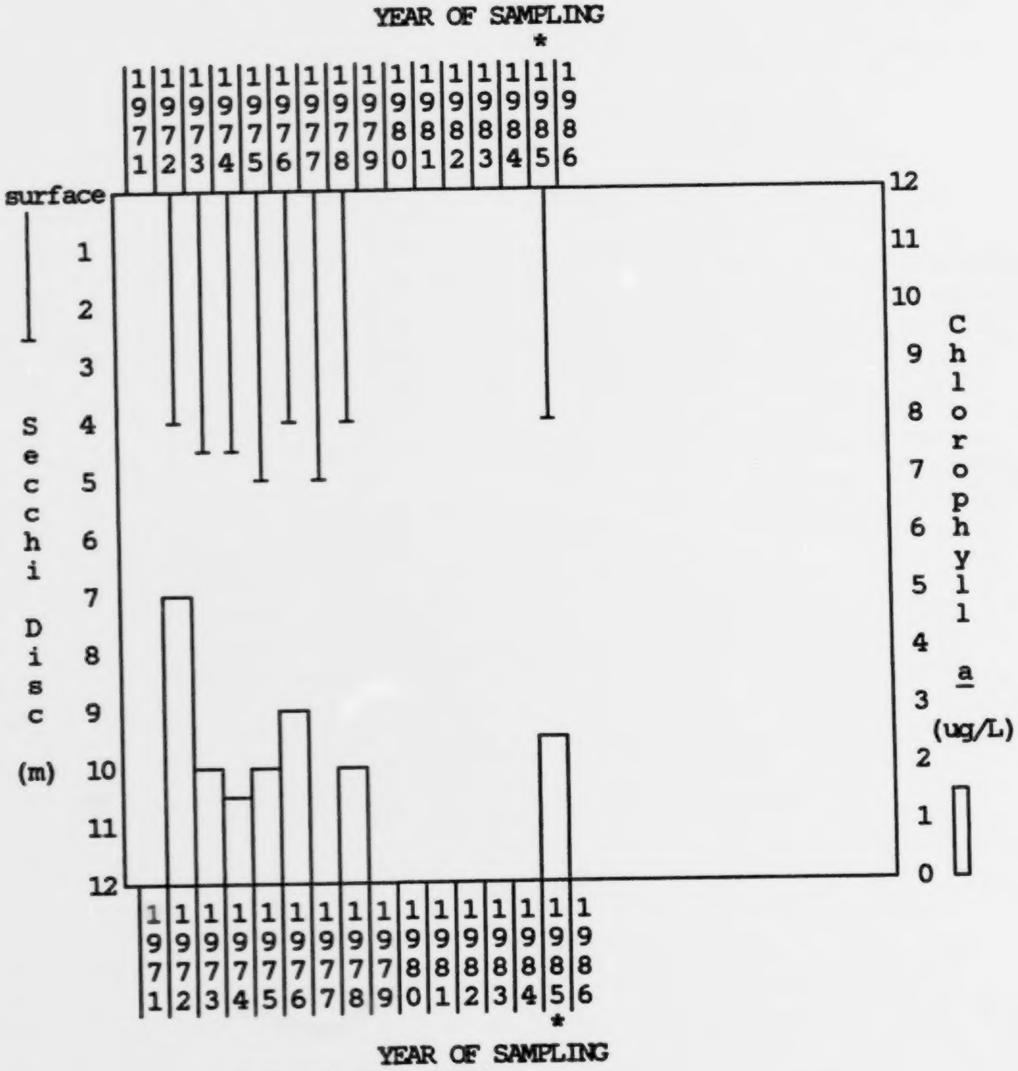
We now have 13 years of data for the South station of Kashagawigamog Lake which provides an excellent record of water quality changes. The degree of water clarity at this location has steadily declined since the start of the program in 1973, with Secchi disc readings greater than 5 m from 1975 to 1978 decreasing to less than 3 ug/L in 1982 and 1983.

Densities of suspended algae have increased from low densities from 1973 to 1975 to moderately high densities in 1980 and 1981.

This apparent change in water quality in the South part of Kashagawigamog Lake prompted a detailed water quality survey by the Ministry of the Environment in 1985. The results of this survey are now being assessed and will be reported when complete.

We hope your valuable assistance in monitoring water quality in Kashagawigamog Lake continues in 1986.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Kashagawigamog Lake (Venture Bay) from 1972 to 1985 Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* Based on 4 samples.

The 8 years of available data for Venture Bay of Kashagawigamog Lake indicates that the water quality has not changed significantly since 1972.

The degree of water clarity has been moderately high consistently for the period of record.

Densities of suspended algae were high in 1972 but since then have been moderately low.

The overall decline in water clarity and increase in chlorophyll a observed in the South end of Kashagawigamog Lake has not been observed in Venture Bay.

We hope that sampling continues in 1986 in order to maintain a continuous record of water quality for this location.

Kasshabog Lake

Belmont & Methuen Townships

County of Peterborough

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Kasshabog Lake in 1985

Station	1		2		4	
	Main		Bill's Bay		Connor's Bay	
Date	S.D.	Chl.a	S.D.	Chl.a	S.D.	Chl.a
June 4	- -	- -	- -	- -	3.5	2.4
June 9	3.9	2.0	4.0	2.6	- -	- -
June 23	3.4	3.3	4.0	2.9	3.0	3.2
July 21	- -	- -	4.0	0.4	3.5	0.4
July 28	3.0	4.7	4.0	1.4	3.5	1.0
Aug 4	4.0	1.5	5.0	5.4	4.0	1.7
Aug 11	- -	- -	- -	- -	3.5	1.5
Aug 18	4.0	2.1	4.0	6.7	4.5	1.4
Aug 26	4.0	3.3	- -	- -	- -	- -
	3.7	2.8	4.2	3.2	3.6	1.7

A good program was done on Kasshabog Lake in 1985. Water quality was similar at all 3 stations sampled. The highest average Secchi disc reading of 4.2 m was in Bill's Bay or Macdonald Bay.

At the Main station the average Secchi disc reading was 3.7 m and in Connors Bay the average was 3.6 m indicating moderately clear water. Average chlorophyll a concentrations ranged from a low of 1.7 ug/L in Connors Bay to 3.2 ug/L in Bill's Bay.

Based on the 1985 results, Kasshabog Lake would be considered moderately enriched, with moderately clear water and low to moderately high densities of suspended algae.

Figure 1: The relationship between Secchi disc and chlorophyll a for Kasshabog Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means.

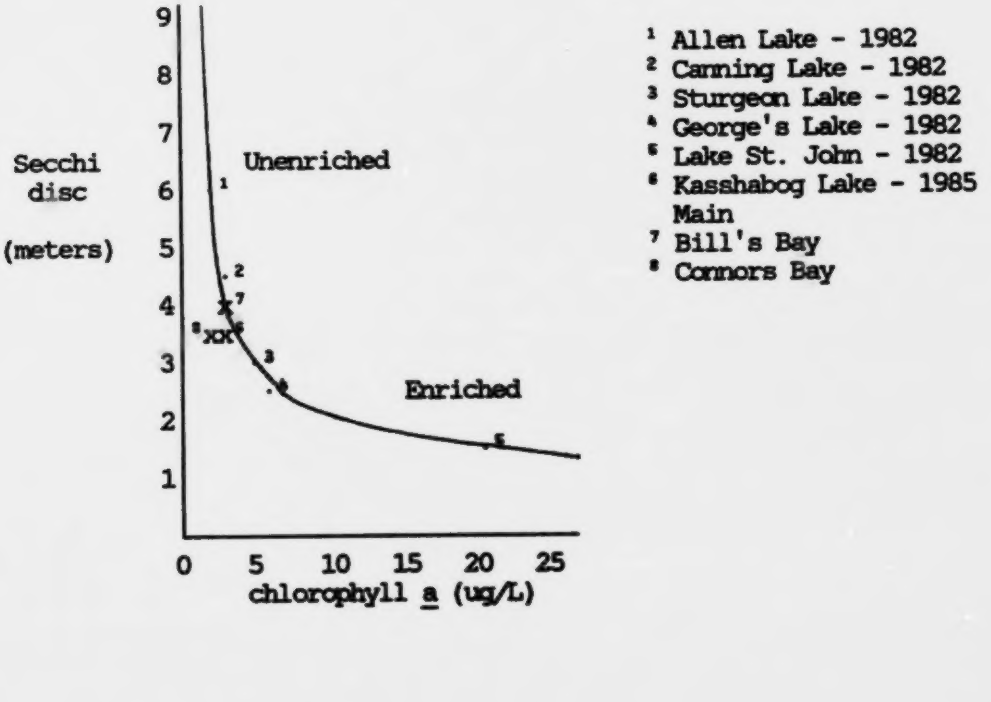
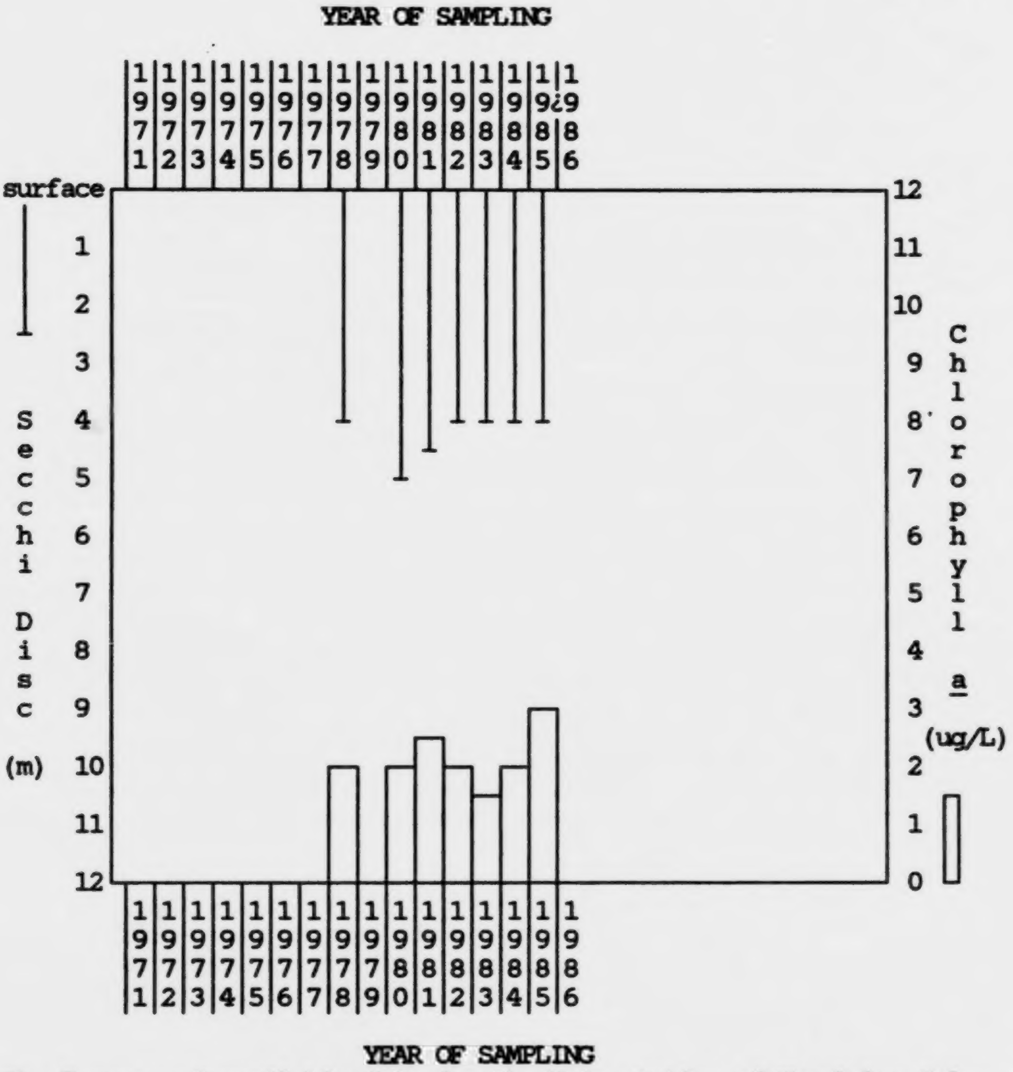
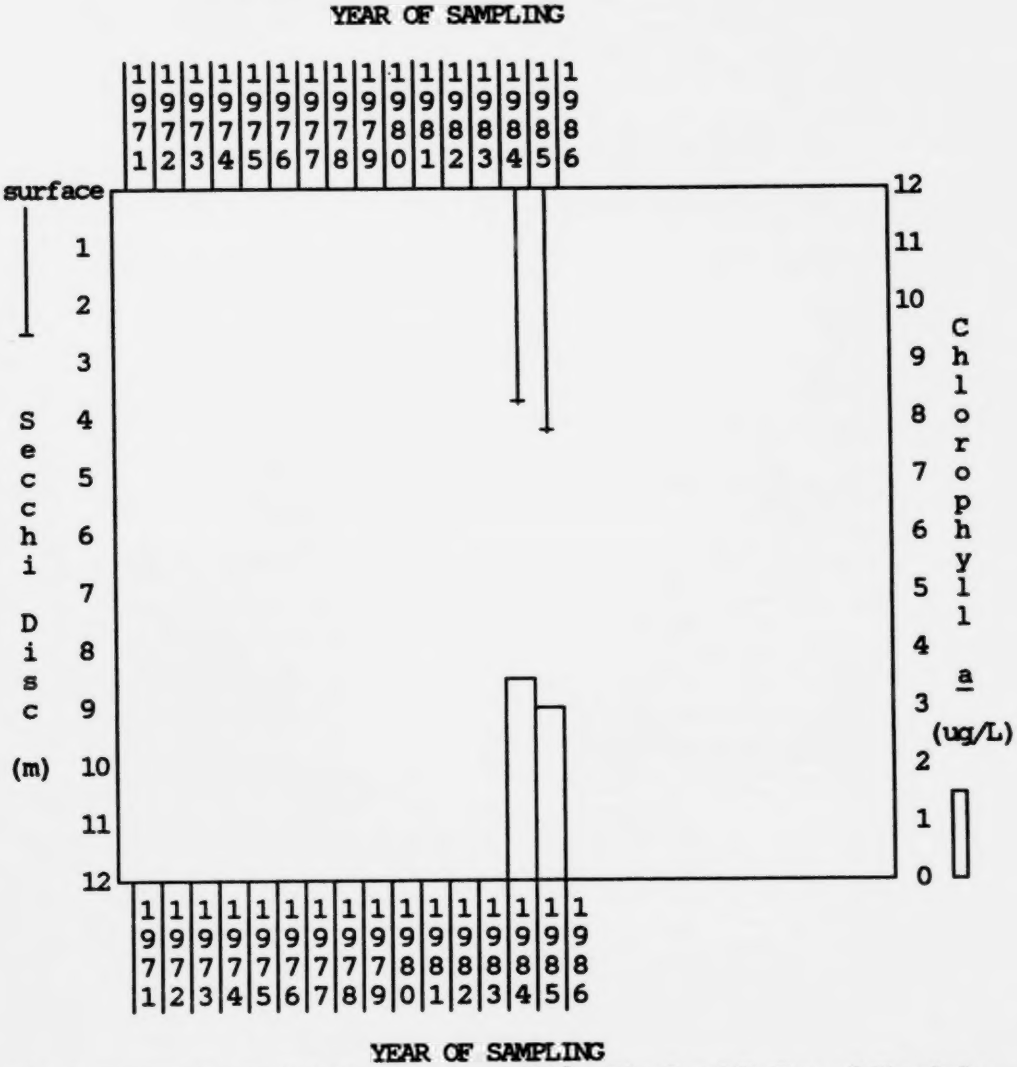


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Kasshabog Lake (Main station) from 1978 to 1985. Seasonal mean data (more than 6 sampling dates) only. A minimum of 4 results was required for graphing.



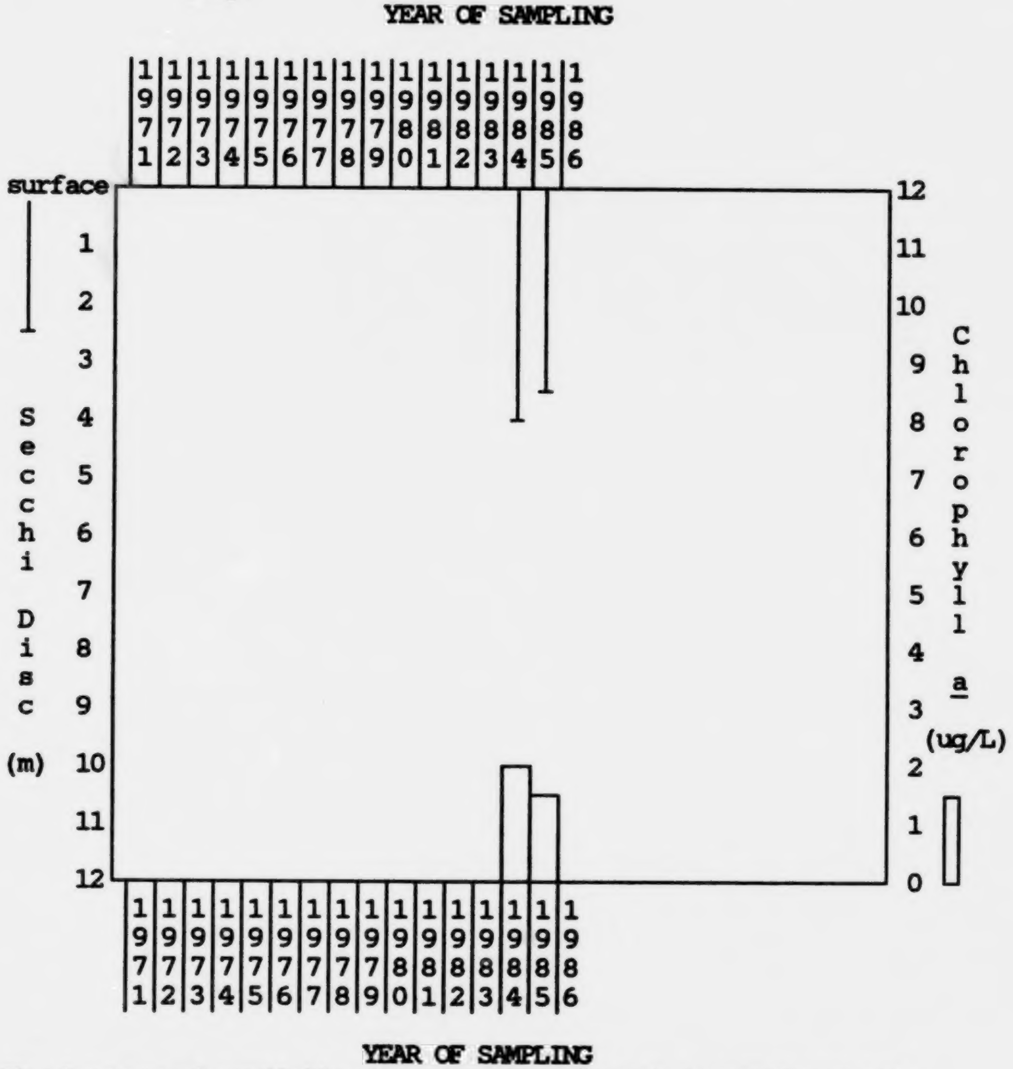
The 7 years of available data for the Main station of Kasshabog Lake indicates that there has been no overall change in water quality. The degree of water clarity has been moderately high for the period of record with Secchi disc readings in the range of 4 to 5 m. Densities of suspended algae have been moderately low with chlorophyll a concentrations in the range of 1.5 to 3 ug/L. We hope you continue your excellent sampling program in 1986.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Kasshabog Lake (Bill's Bay) 1984 to 1985. Seasonal mean data (more than 6 sampling dates) only.



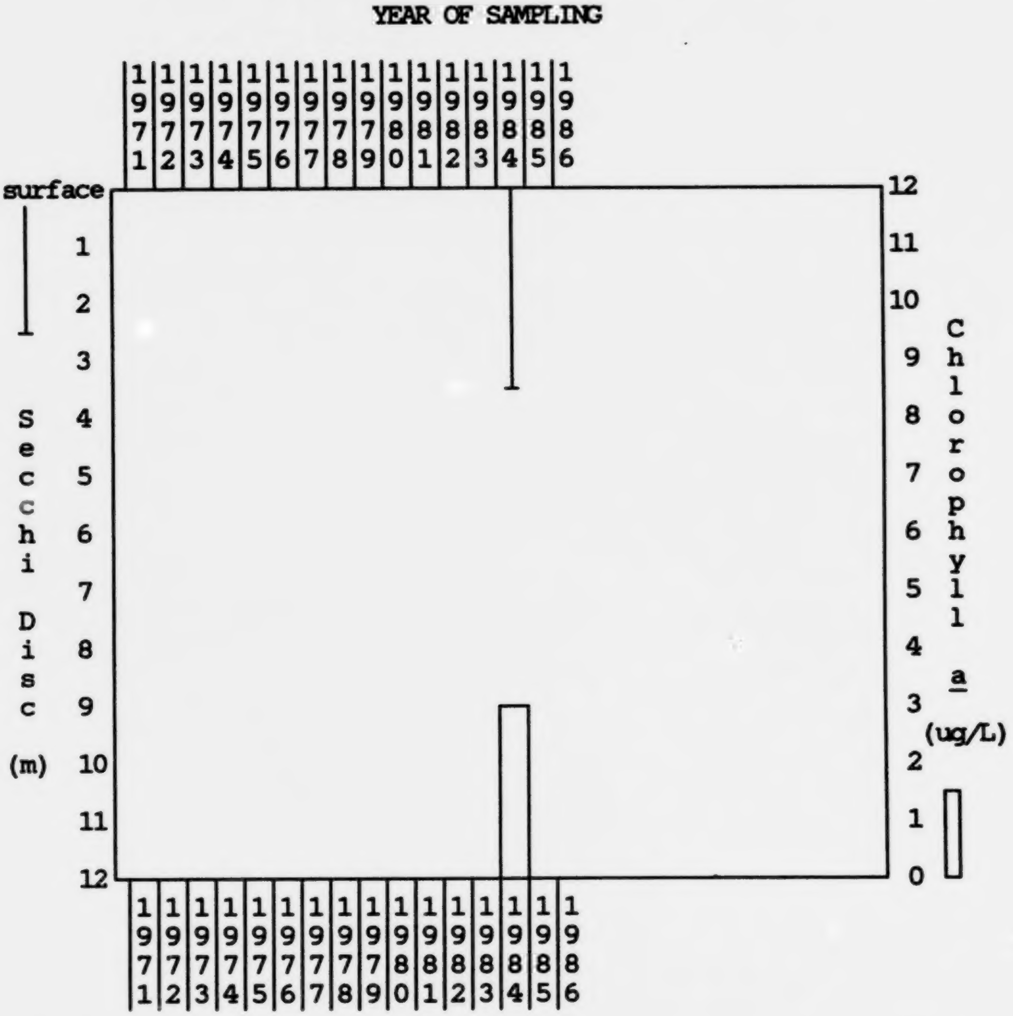
The 2 years of available data for Bill's (Macdonald) Bay of Kasshabog Lake indicate very similar water quality for 1984 and 1985. We hope that sampling is continued in 1986 to establish a long-term record of water quality for this location.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Kasshabog Lake (Connors Bay) from 1984 to 1985. Seasonal mean data (more than 6 sampling dates) only.



The 2 years of available data for Connor's Bay of Kasshabog Lake indicate that water quality has not changed significantly.
The degree of water clarity continues to be moderately high with low densities of suspended algae.
We hope that sampling continues in 1986 in order to establish a continuous long-term record of water quality data for this station.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Kasshabog Lake (Stoney Pt. Bay) from 1984. Seasonal mean data (more than 6 sampling dates) only. A minimum of 4 results was required for graphing.



No sampling was done at this location in 1985.

Kawagama Lake

Sherborne Township

County of Haliburton

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Kawagama Lake in 1985

Station Date	1-Minden Bay S.D.	Chl.a	3-Fishpole Pt S.D.	Chl.a	4-North Shore S.D.	Chl.a	5-Fletcher S.D.	Chl.a
June 30	6.1	1.5	10.25	L 0.5	10.0	L 0.8	7.9	1.3
Aug 11	6.0	3.7	- -	- -	11.6	L 0.8	7.5	1.4
Sept 2	4.1	3.7	- -	- -	10.1	1.0	7.3	2.2
Sept 29	- -	- -	- -	- -	7.0	1.3	- -	- -
	-----	-----	-----	-----	-----	-----	-----	-----
					9.7	L 1.0		

L - less than

Insufficient information was collected in 1985 to obtain reliable seasonal data. Based on the results obtained in 1985, Secchi disc readings were lowest in Minden Bay and highest at Fishpole Point, however the overall water clarity in Kawagama Lake was high.

Moderately high densities of suspended algae were observed in Minden Bay. Other stations had low densities of suspended algae.

We recommend that more frequent sampling be done in order to obtain meaningful results.

Figure 1: The relationship between Secchi disc and chlorophyll a from Kawagama Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means except Kawagama Lake.

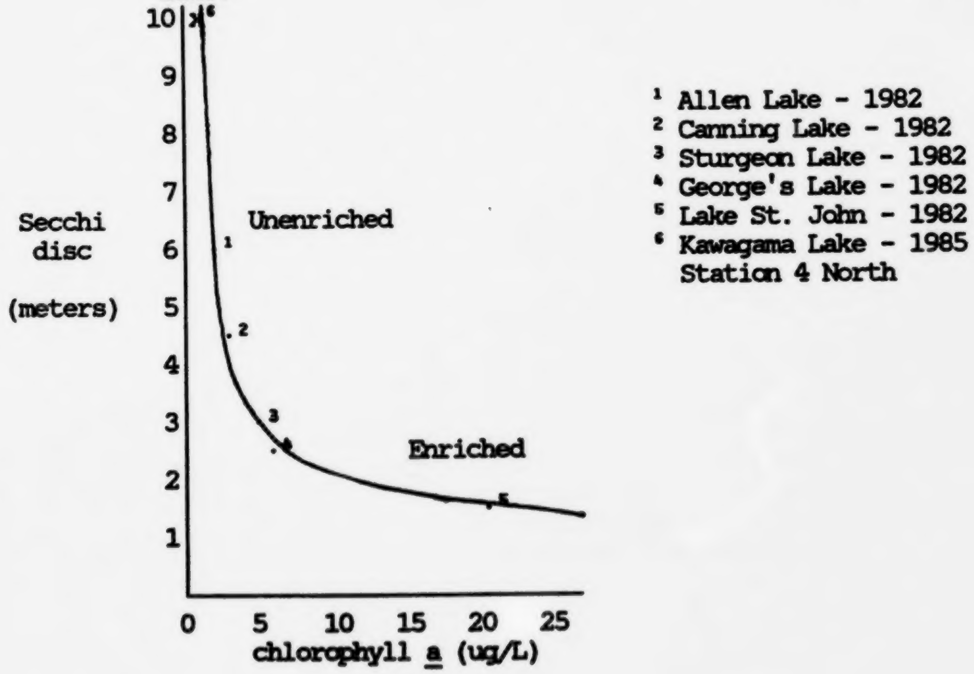
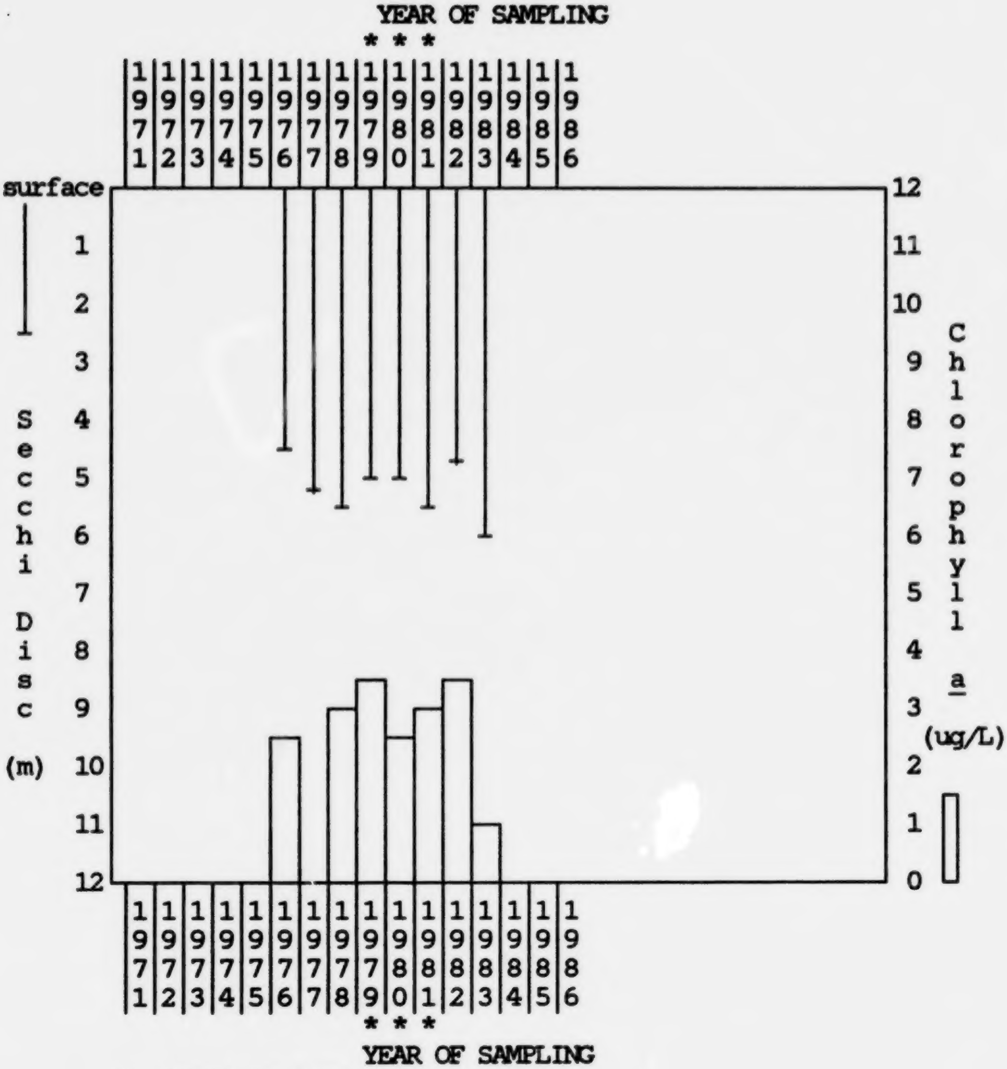


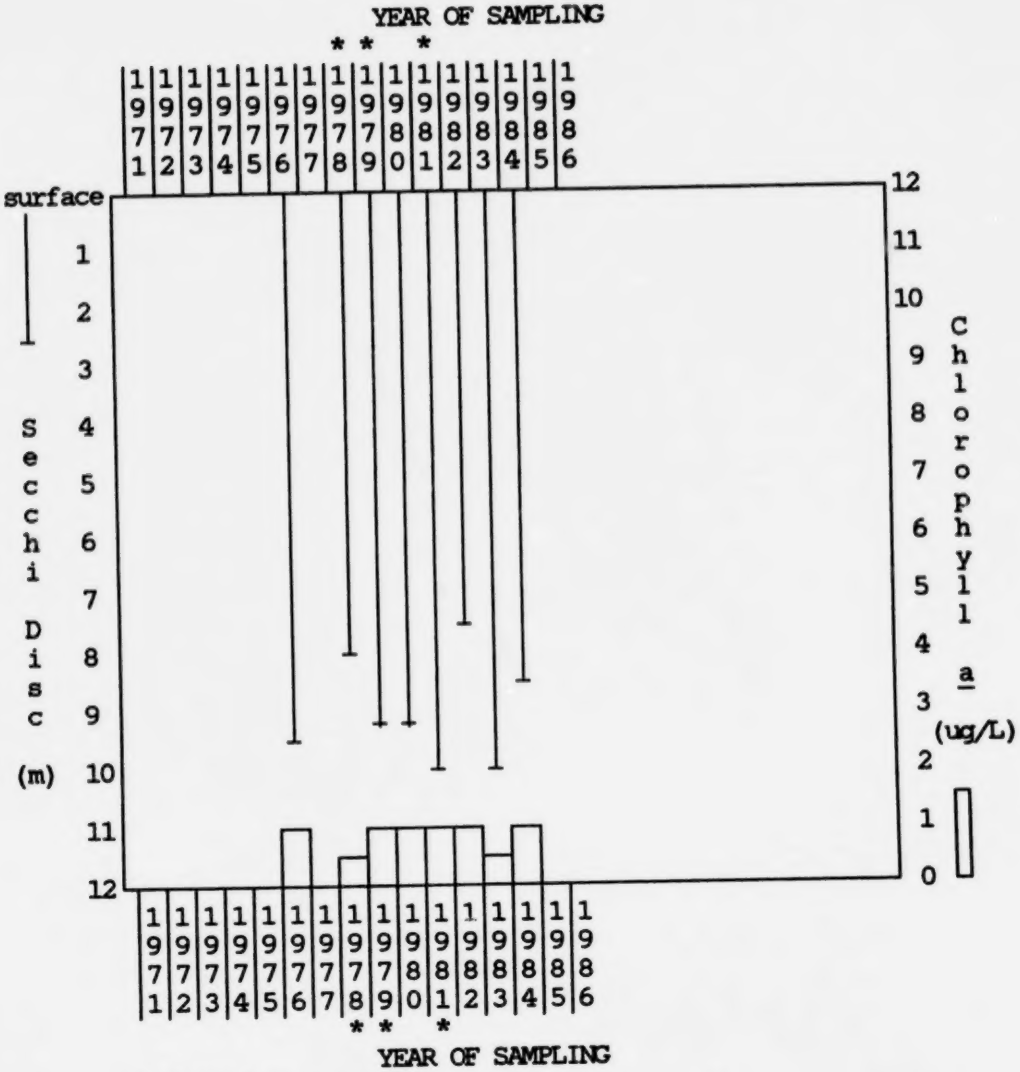
Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Kawagama Lake (Station 1 Minden Bay) from 1976 to 1983. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* based on 5 results

We now have 8 years of data for Minden Bay of Kawagama Lake.
The degree of water clarity has been moderately high to high for the period of record with Secchi disc readings ranging from 4.5 to 6 m.
The densities of suspended algae have ranged from low to moderately high. This reflects the normal changes we might expect to see in a shallower bay with restricted water circulation.
We hope you continue to sample Minden Bay in 1986 but with increased sampling frequency.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Kawagama Lake (Station 3 Fishpole Point) from 1976 to 1984. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



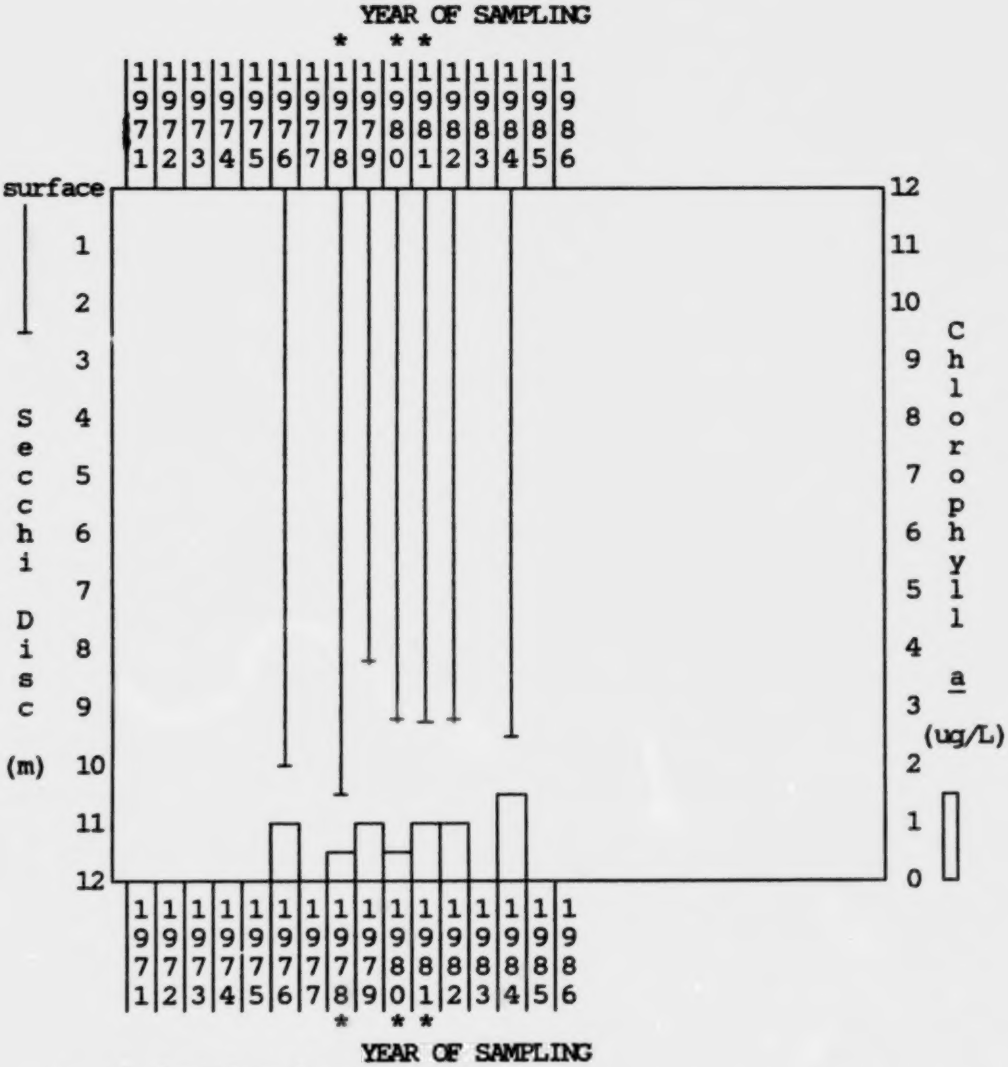
* based on 5 results

We now have 8 years of data available for the Fishpole Pt. station. These results indicate that water quality continues to be excellent with a very high degree of water clarity and low densities of suspended algae.

There has been no change in water quality since 1975.

We hope sampling continues in 1986 with increased sampling frequency.

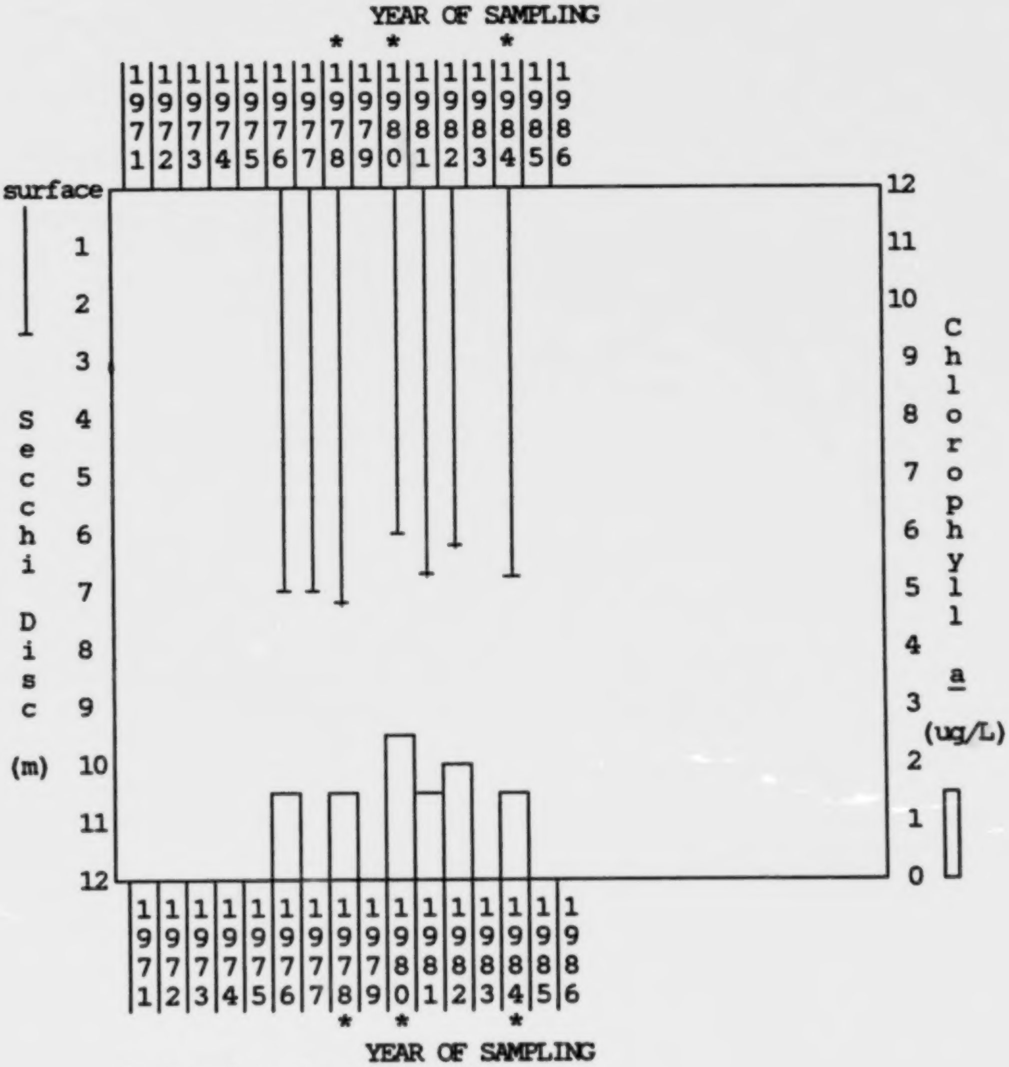
Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Kawagama Lake (Station 4 North Shore) from 1976 to 1984. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* based on 4 or 5 results

The 7 years of available data for the North Shore station of Kawagama Lake indicate that water quality continues to be excellent.
The degree of water clarity is very high and the densities of suspended algae are very low.
We hope you continue to sample at this location in 1986 with increased sampling frequency.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Kawagama Lake (Station 6 Fletcher Bay) from 1976 to 1984. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* based on 4 or 5 results

This location was not sampled in 1985, however, past results indicate that there has been no noticeable change in water quality since 1976. The degree of water clarity continues to be very high and the densities of suspended algae have been low for most of the period of record except in 1980.

Water quality at this location continues to be excellent.

Kennisis Lake

Havelock & Guilford Townships

County of Haliburton

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Kennisis Lake in 1985

Station	A		B		C	
Date	S.D.	Chl.a	S.D.	Chl.a	S.D.	Chl.a
July 28 *	7.0	L 0.9	- -	- -	- -	- -
Aug 11	9.0	1.2	7.0	0.9	7.0	0.9
Aug 18	8.0	1.5	- -	- -	- -	- -
Sept 2	7.0	1.5	8.0	1.4	7.0	1.2
Oct 14	N G ?	1.0 ?	8.0	1.4	7.0	1.2
	7.8	L 1.2				

* - date not given ? - station name not given L - less than

In 1985, sampling was done on 5 occasions at A station and on 2 occasions at B and C stations.

These results indicate a high degree of water clarity and low densities of suspended algae, typical of an unenriched lake.

Water quality of Kennisis Lake was excellent in 1985.

In 1986, please be sure to enter the sampling date, station location, Secchi disc reading and chlorophyll sample depth.

Figure 1: The relationship between Secchi disc and chlorophyll a for Kennisis Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means.

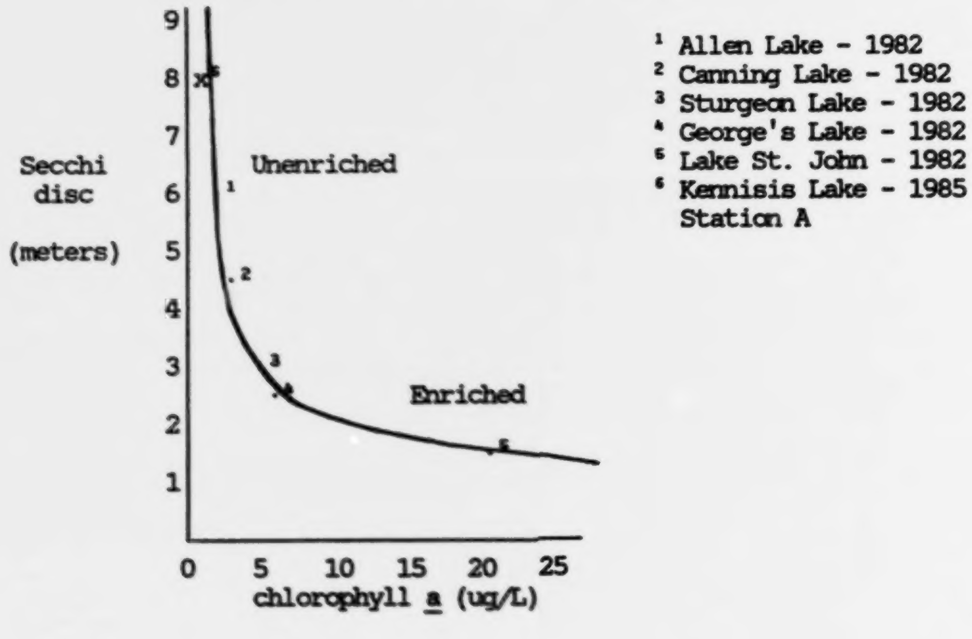
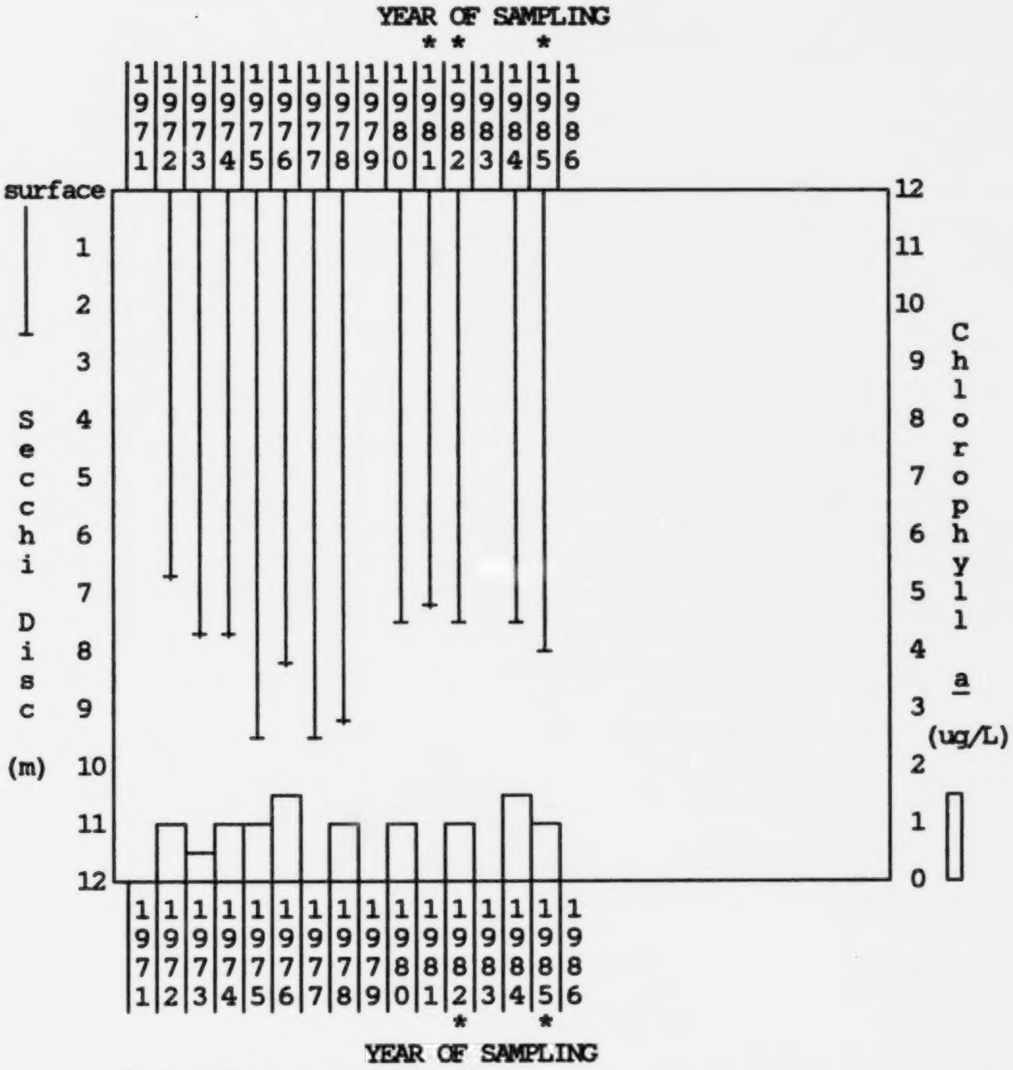


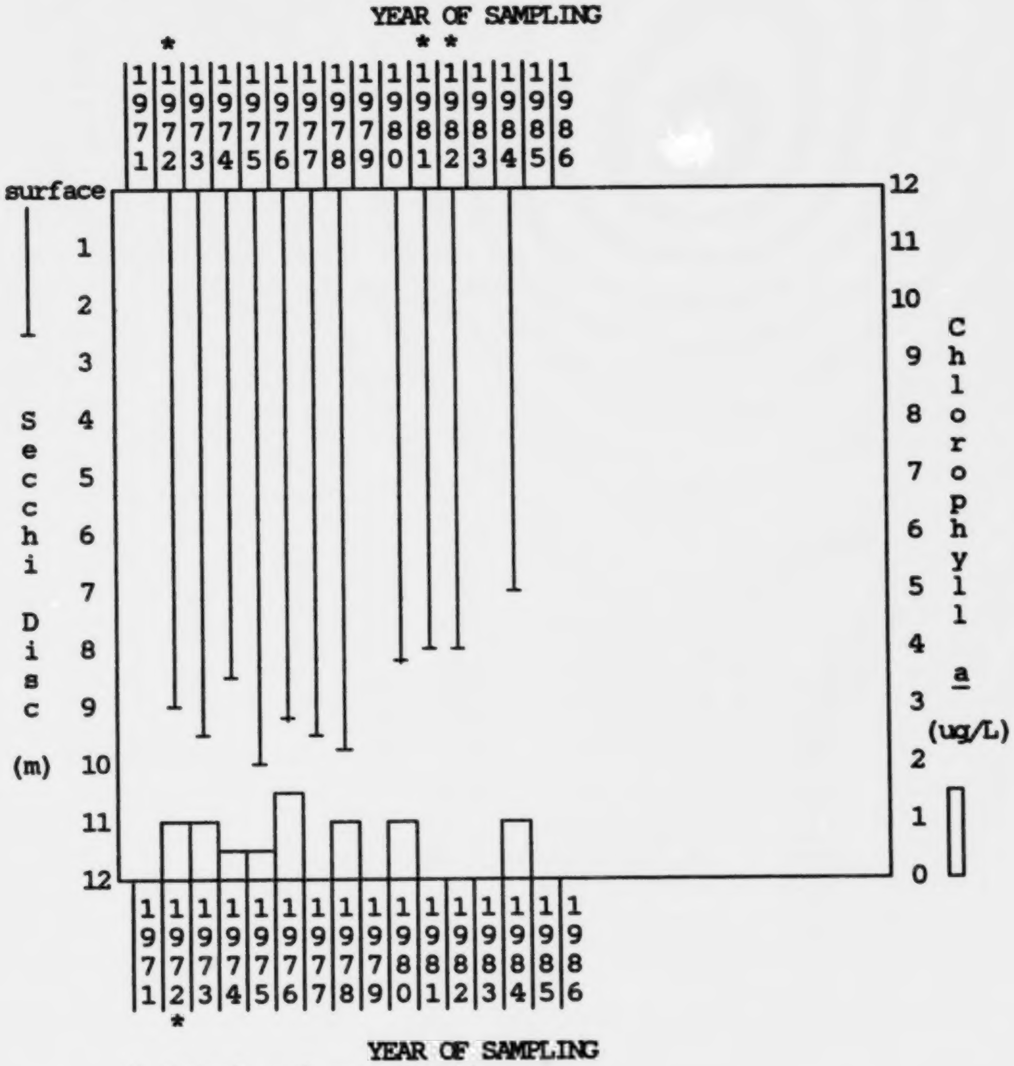
Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Kennisis Lake (Point A) from 1972 to 1984. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* based on 4 or 5 results

An excellent historical record of water quality has been established for Point A in Kennisis Lake with 12 years of available data. The degree of water clarity has been very high for the period of record with Secchi disc readings ranging from 6.5 to 9.5 m. Densities of suspended algae have been consistently low since 1972. We hope that you continue your excellent participation in this program in 1986.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Kennisis Lake (Point B) from 1973 to 1984. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* based on 4 or 5 results

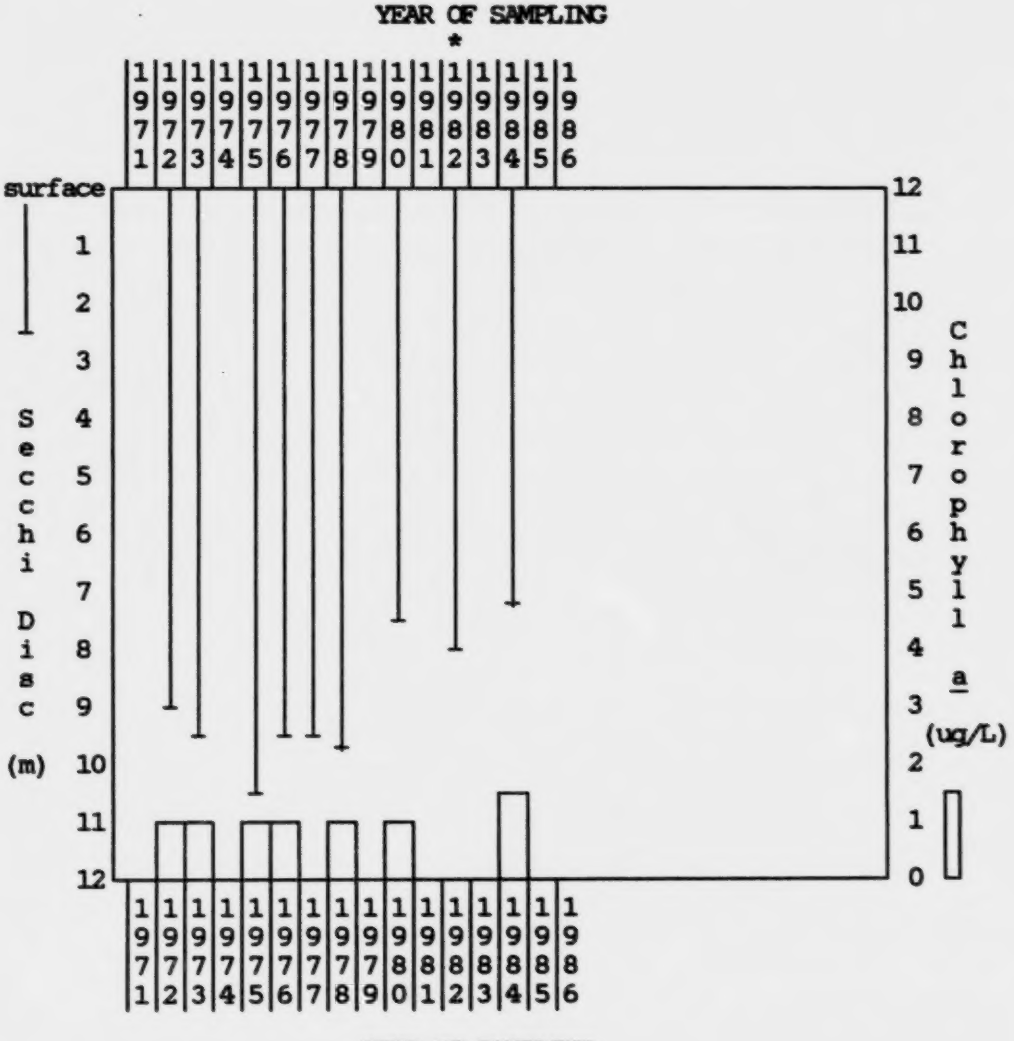
We have 11 years of available data for Point B of Kennisis Lake. In 1985, insufficient sampling was done for us to include the data on the graph, however, previous results indicate that the water quality at this location has been very good.

The degree of water clarity has declined somewhat in recent years with Secchi disc readings ranging from 8.5 to 10 m from 1972 to 1978 and then ranging from 7 to 8.5 m from 1980 to 1984.

There has been no corresponding increase in chlorophyll a concentrations so the reason for the decreased water clarity is not apparent.

We hope that sampling is continued in 1986 with increased sampling frequency at this location.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Kennisis Lake (Point C) from 1972 to 1984. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* based on 4 results

We have 9 years of available data for Point C on Kennisis Lake. Insufficient sampling was done in 1985 to obtain reliable data, however, past results indicate that the water quality was very good. The degree of water clarity appears to have declined somewhat in recent years. Secchi disc readings were in the range of 9 to 10.5 m from 1972 to 1978, then ranged from 7 to 8 m from 1980 to 1984. We hope that sampling continues at this location in 1986 with increased sampling frequency in order to monitor this apparent trend.

Koshlong Lake

Glamorgan Township

County of Haliburton

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Koshlong Lake in 1985.

Station	Gains Point		West of Carruthers Is.	
Date	S.D.	Chl.a	S.D.	Chl.a
May 20	4.2	LA	4.0	3.0
June 9	3.7	3.8	3.0	5.5
June 23	3.05	4.1	3.5	4.8
July 1	5.3	3.1	4.8	3.1
Aug 5	5.0	2.9	5.7	4.1
Aug 18	4.5	UR	5.0	4.8
Aug 25	5.1	3.9	5.1	2.4
Sept 2	5.0	2.9	5.0	2.9
Oct 14	5.1	1.4	6.0	1.8
	4.6	3.2	4.7	3.6

UR - unreliable sample result
LA - lab accident

In 1985, an excellent sampling program was done on Koshlong Lake with 9 sampling dates from May 20 to Oct. 14. Secchi disc readings were similar at the 2 stations with average values of 4.6 m and 4.7 m, indicating a moderately high degree of water transparency. Chlorophyll a concentrations were moderate at Gain Point averaging 3.2 ug/L. West of Carruthers Island, chlorophyll a concentrations were moderately high averaging 3.6 ug/L. These results indicate that Koshlong Lake would be considered moderately enriched with a moderately high degree of water clarity and moderate densities of suspended algae.

Figure 1: The relationship between Secchi disc and chlorophyll a for Koshlong Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means.

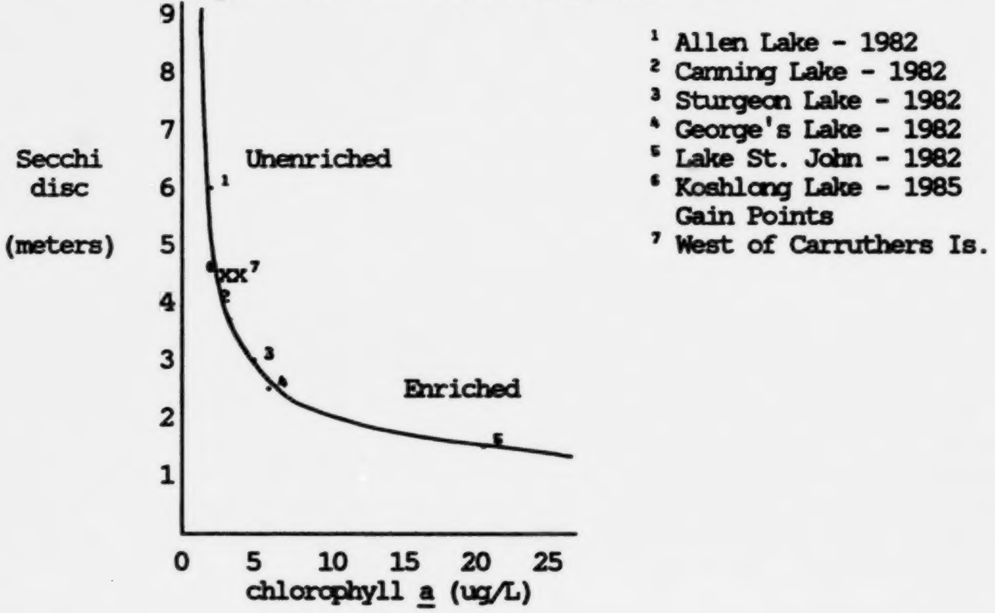
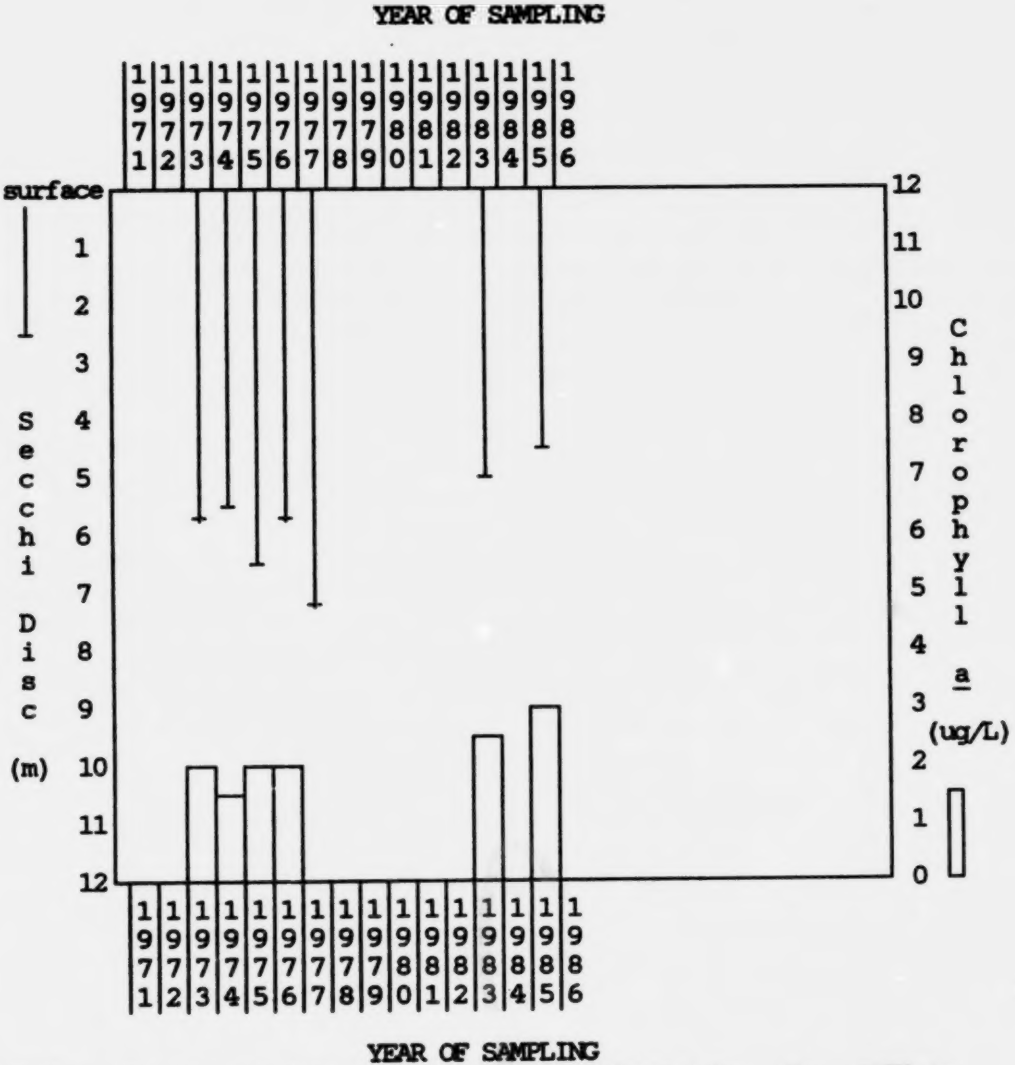


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Koshlong Lake (Gains Point) from 1973 to 1985 (1973-1983 results from 1 central station).
Seasonal mean data (more than 6 sampling dates) only.

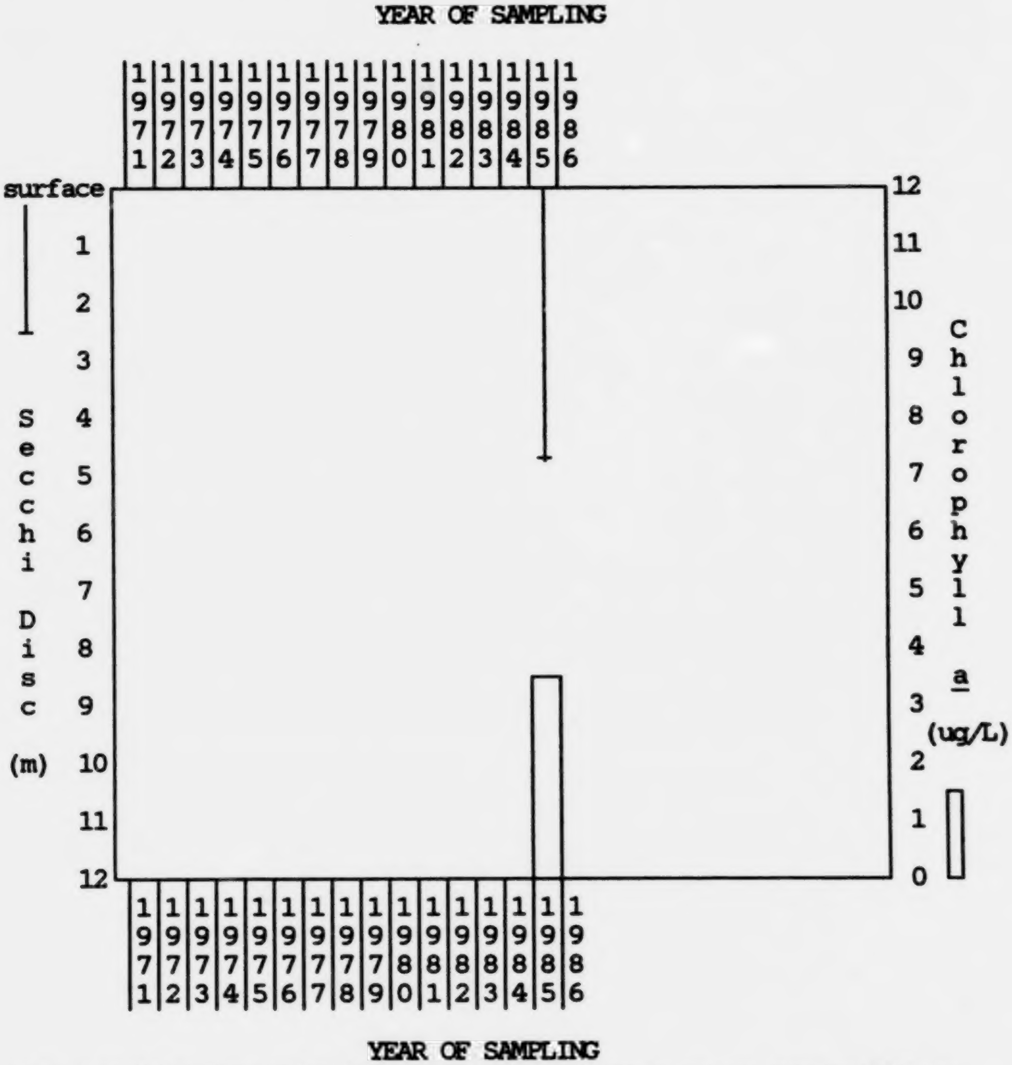


We have 7 years of data available for Koshlong Lake. From 1973 to 1983 the results are from a central station and not from Gains Point. These results indicate that the degree of water transparency was high from 1973 to 1977 with a slight decrease in 1983. Gains Point in 1985 had a moderately high degree of water clarity.

Densities of suspended algae were low from 1973 to 1976 and moderately low in 1983 and 1985.

We hope that sampling continues at Gains Point in 1986 in order to establish a long-term record of water quality data for this location.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Koshlong Lake (West of Carruthers Island) in 1985. Seasonal mean data (more than 6 sampling dates) only.



This location has only been sampled for 1 year so we are unable to make any comments regarding long-term water quality changes at this location.

We hope you continue to sample in 1986 to establish a good historical record of water quality for Koshlong Lake at this location.

Kushog Lake

Stanhope Township

County of Haliburton

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Kushog Lake in 1985

Station	Frasers Bay (Middle)		Southend	
Date	S.D.	Chl.a	S.D.	Chl.a
July 28	4.0	1.9	3.75	2.2
Aug 12	5.5	1.7	5.5	1.9
Aug 22	6.6	2.1	4.75	2.0
	-----	-----	-----	-----

Insufficient sampling was done in 1985 to obtain reliable seasonal averages with sampling done on 3 occasions.
Based on the results obtained, the degree of water clarity was high at the middle station and moderately high at the Southend station. Chlorophyll a concentrations were low indicating low densities of suspended algae.

Figure 1: The relationship between Secchi disc and chlorophyll a for and a number of recreational lakes in the province. All data are seasonal means.

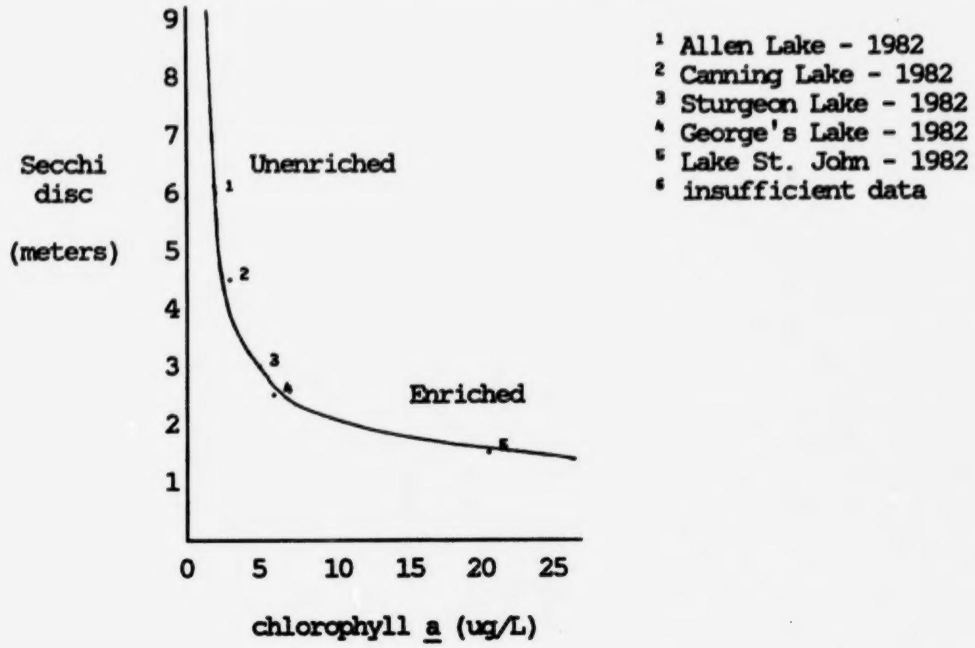
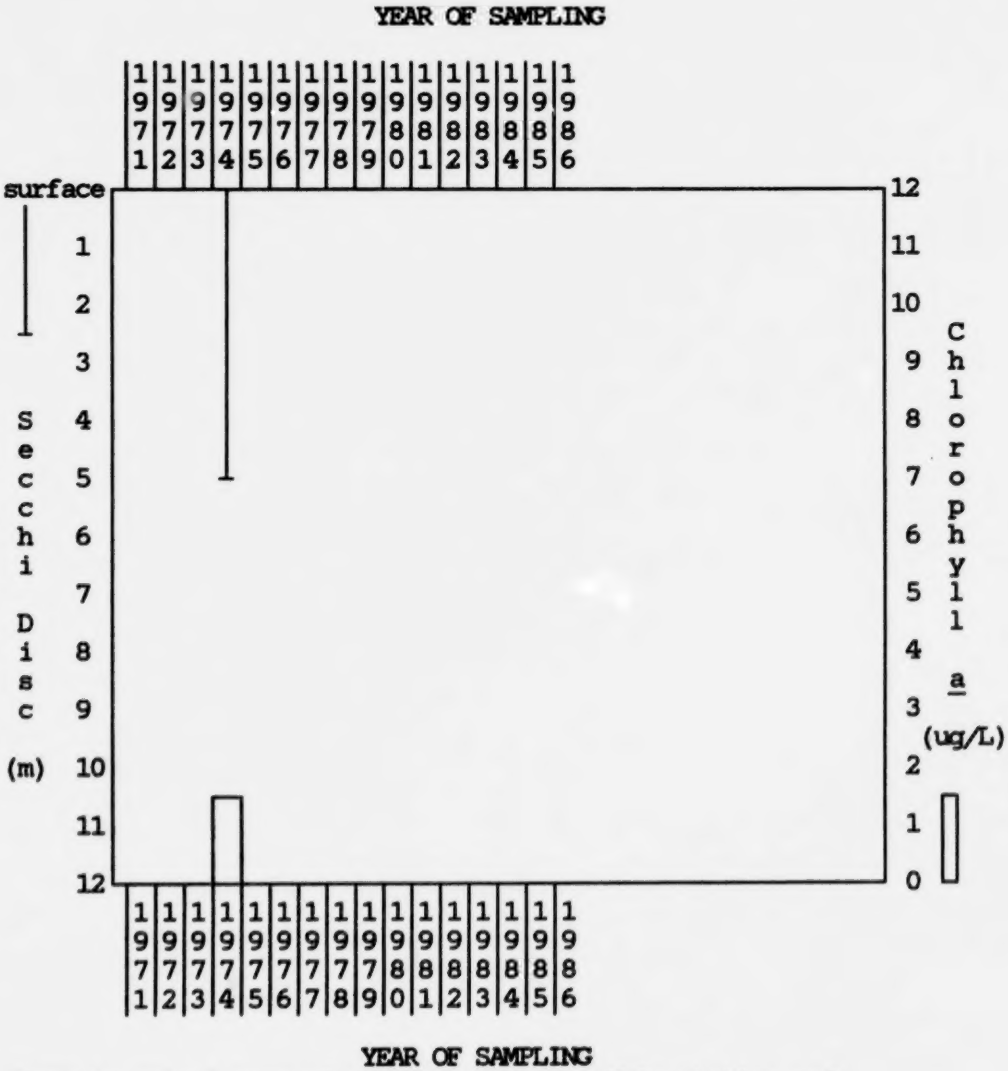
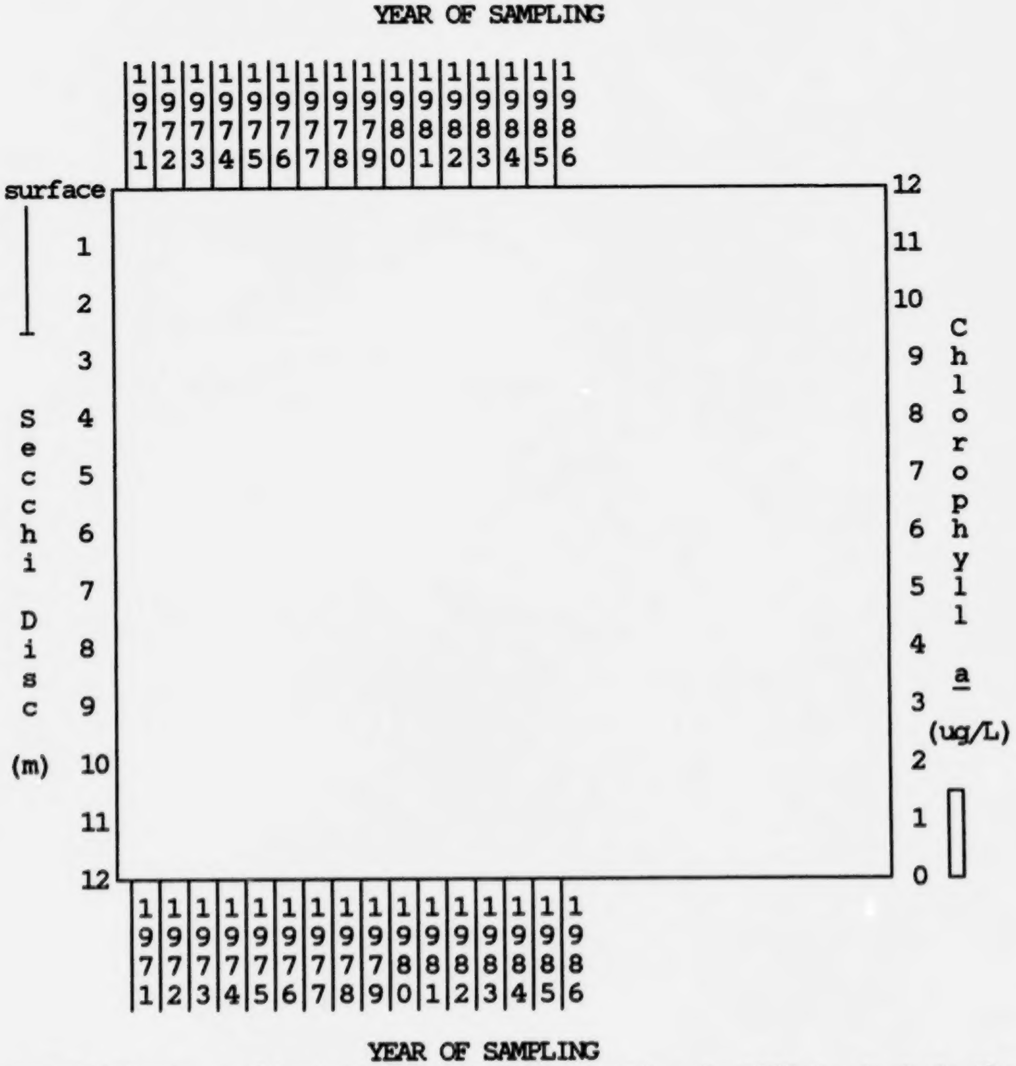


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Kushog Lake (Fraser's Bay). 1974 data is a central location on Kushog Lake. A minimum of 4 results was required for graphing.



There is only 1 year of reliable data for this station and insufficient sampling was done in 1985 so we cannot comment on long-term water quality changes.
We hope sampling continues in 1986 with increased sampling frequency.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Kushog Lake (South End)
Seasonal mean data (more than 6 sampling dates) only.



Insufficient sampling was done at this location in 1985 to include the data on the graph.

Township of Lake of Bays

District Municipality of Muskoka

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Lake of Bays in 1985

Station	2		5		6	
	Trading Bay		East Bigwin		Haystack Bay	
Date	S.D.	Chl.a	S.D.	Chl.a	S.D.	Chl.a
July 30	8.0	1.8	6.0	1.6	6.5	2.0
Aug 9	NG	1.7	NG	1.0	NG	1.3
Aug 14	5.5	1.6	NG	1.1	NG	1.2
Aug 22	6.5	1.9	6.5	1.5	6.5	1.7
Sept 2	6.5	2.2	6.0	1.7	6.5	1.7
Sept 7	6.5	1.9	6.5	1.4	6.0	1.7
	6.6	1.9	6.3	1.4	6.4	1.6

NG - Secchi disc reading not given

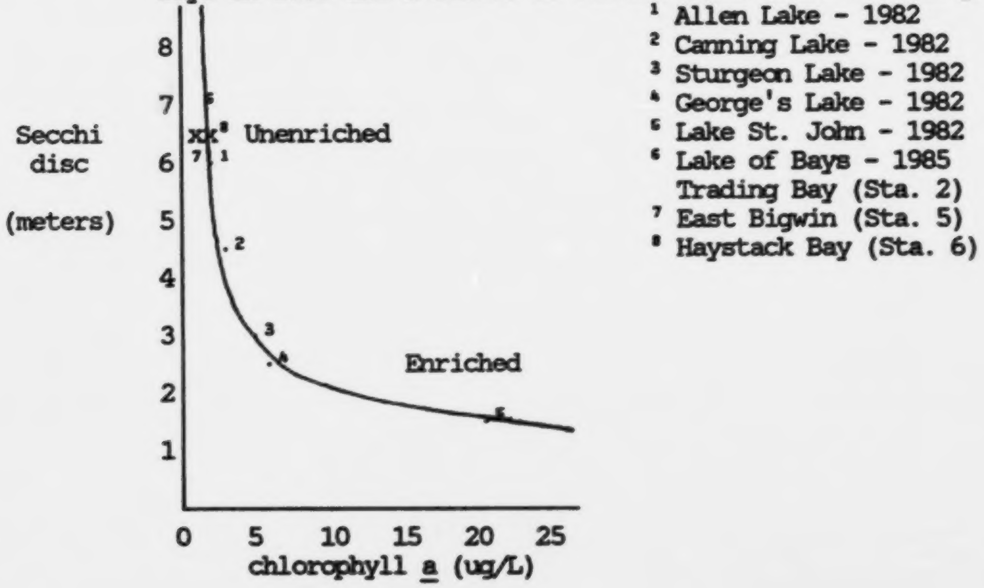
In 1985 a good sampling program was done on Lake of Bays with sampling done on 6 occasions from July 30 to Sept. 9.

Secchi disc readings indicated a high degree of water clarity at all 3 stations with averages of 6.3 m at East Bigwin, 6.4 m at Haystack Bay and 6.6 m at Trading Bay.

Chlorophyll a concentrations were also similar with averages ranging from 1.4 to 1.9 ug/L, indicating low densities of suspended algae.

Water quality of Lake of Bays in 1985 was excellent, typical of unenriched lake conditions. In 1986, please be sure to enter Secchi disc readings and sampling dates for all samples on the sample submission sheets.

Figure 1: Relationship between Secchi disc and chlorophyll a for Lake of Bays in 1985 and a number of recreational lakes in the province.



Township of Lake of Bays

District Municipality of Muskoka

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Lake of Bays in 1985

Station	7		10		12	
	Fairview Channel		Gull Island		Dwight Bay	
Date	S.D.	Chl.a	S.D.	Chl.a	S.D.	Chl.a
Aug 2	7.5	1.1	7.0	L0.9	6.0	1.0
Aug 11	N G	1.1	N G	1.1	N G	L0.9
Aug 22	8.0	1.2	- -	- -	- -	- -
Aug 23	- -	- -	7.0	1.3	6.0	1.3
Aug 31	6.0	1.5	7.0	1.3	7.0	1.3
N G	8.0	1.3	7.0	1.3	6.0	1.3
Sept. 7	7.0	1.2	6.0	1.4	5.0	1.3
	7.3	1.2	6.8	L1.2	6.0	L1.2

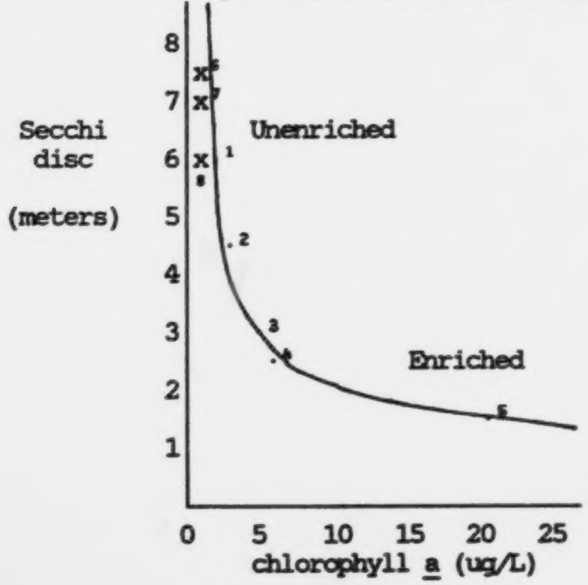
NG - Not given L - less than

The highest degree of water transparency in Lake of Bays was observed at Station 7 in Fairview Channel with an average Secchi disc reading of 7.3 m. Water transparency was also high at Stations 10 and 12.

Densities of suspended algae were low at these 3 stations with average chlorophyll a concentrations of 1.2 ug/L or less.

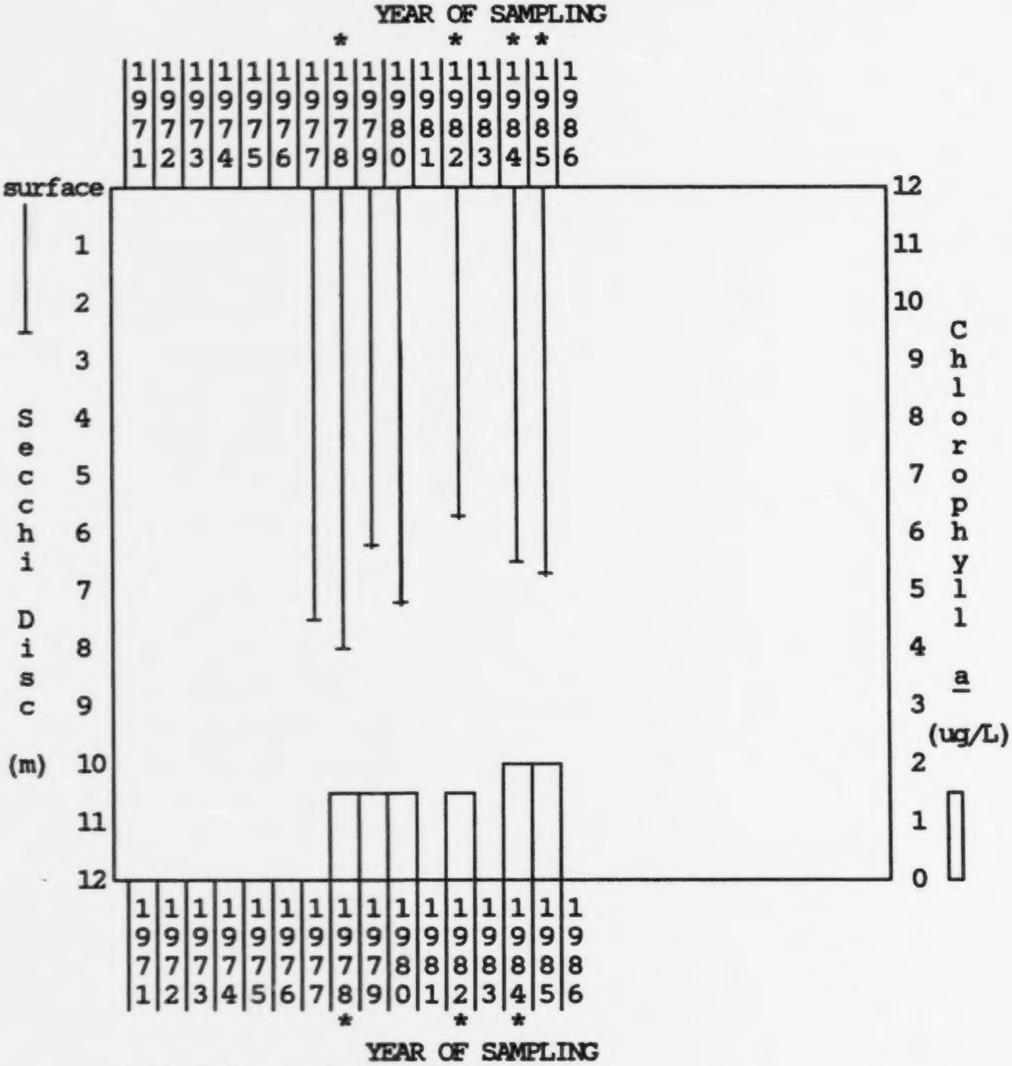
Water quality in Lake of Bays was excellent in 1985, typical of unenriched conditions. In 1986, please be sure to enter the sampling dates and Secchi disc readings for all samples on the submission forms.

Figure 1: The relationship between Secchi disc and chlorophyll a for Lake of Bays in 1985 and a number of recreational lakes in the province. All data are seasonal means.



[1] Allen Lake - 1982
[2] Canning Lake - 1982
[3] Sturgeon Lake - 1982
[4] George's Lake - 1982
[5] Lake St. John - 1982
[6] Lake of Bays - 1985 Fairview Channel (Sta. 7)
[7] Gull Is. Channel (Sta.10)
[8] Dwight Bay (Sta. 12)

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Lake of Bays (Station 2 Trading Bay) from 1977 to 1985. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* based on 4 or 5 results

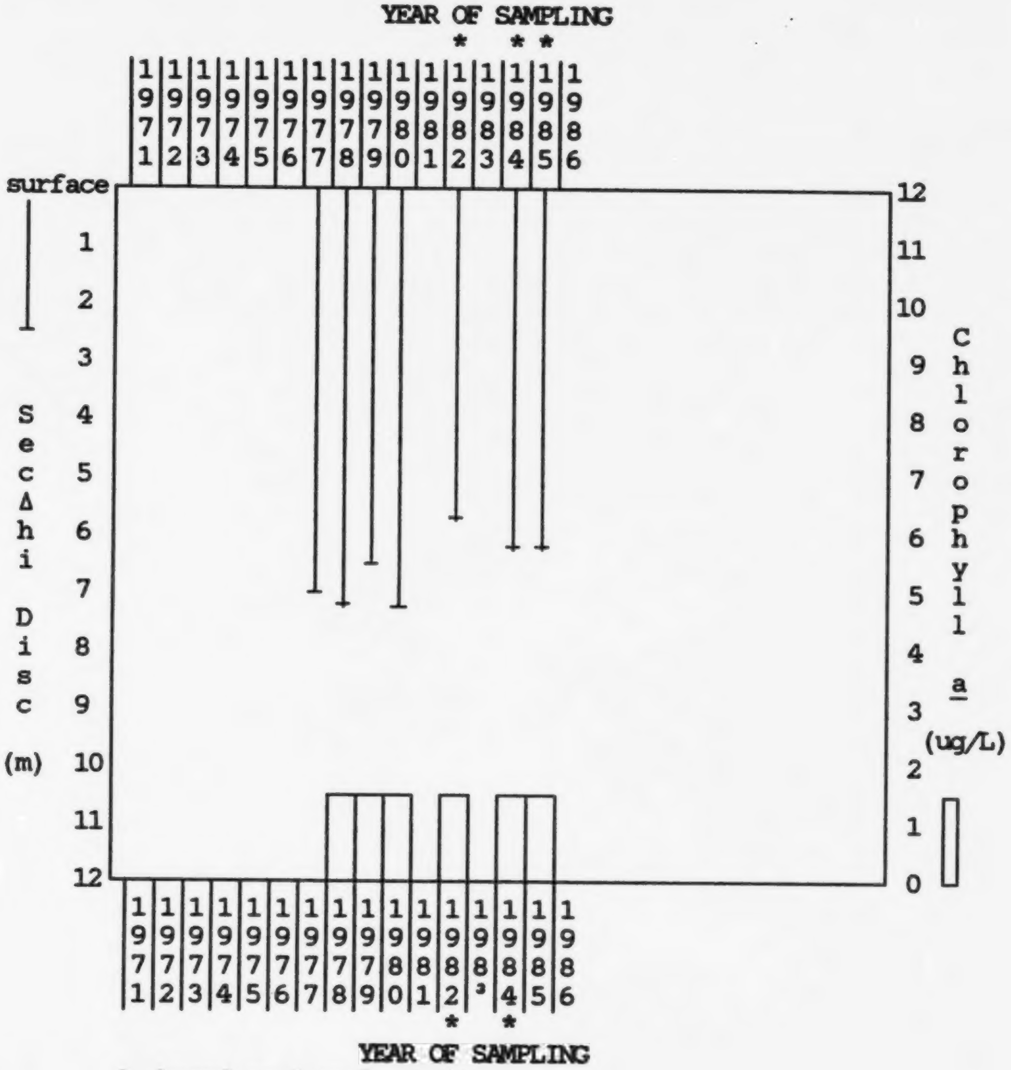
We now have 7 years of data available for Trading Bay of Lake of Bays. The degree of water clarity has been high for the period of record with Secchi disc readings ranging from 6 to 8 m.

Densities of suspended algae have been low since 1978.

There has been no overall change in water quality observed at this location since the start of sampling in 1977. Water quality continues to be excellent.

We hope that sampling continues in 1986.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Lake of Bays (Station 5 East Bigwin) from 1977 to 1985. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* based on 4 or 5 results

There is 7 years of available data for East Bigwin station on Lake of Bays.

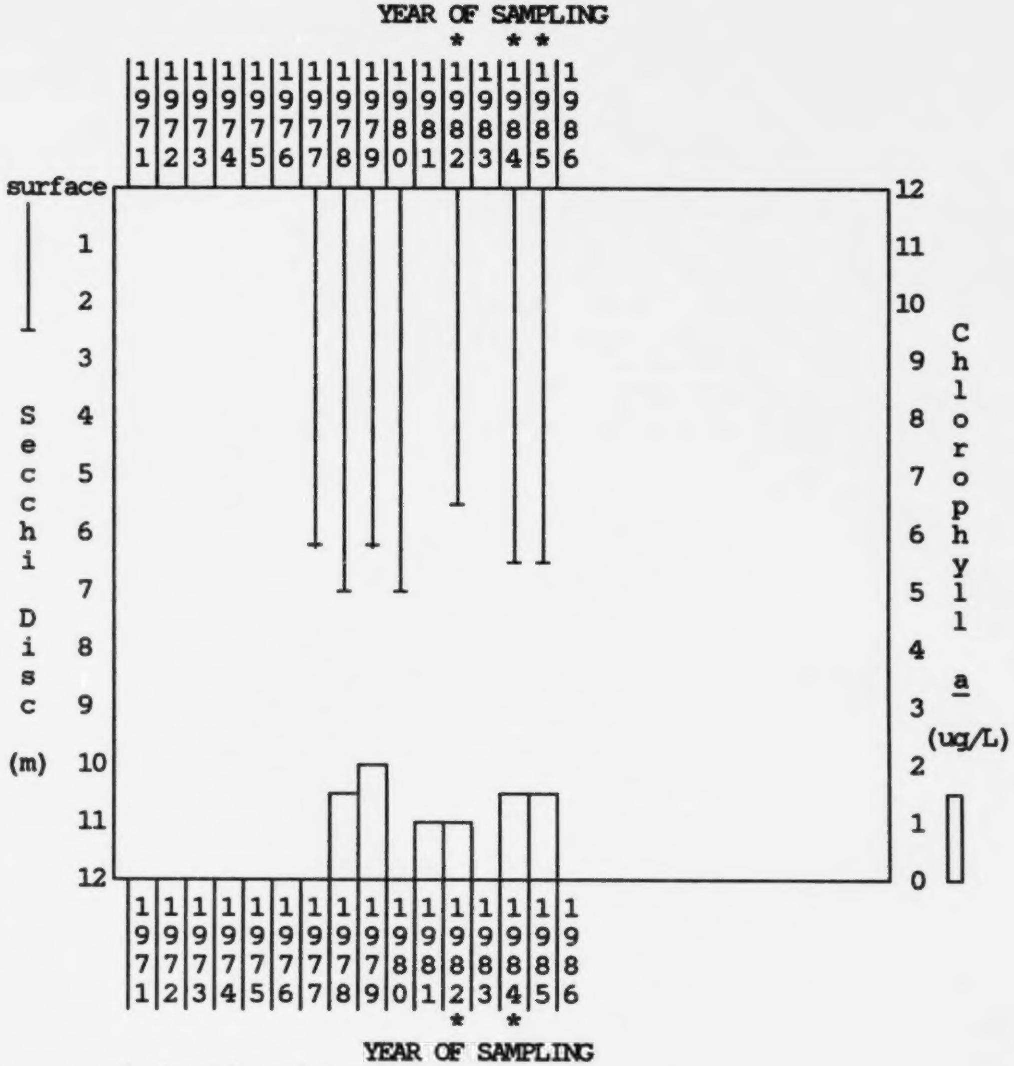
The degree of water clarity has been high since 1977 with Secchi disc readings in the range of 5.5 to 7.5 m.

Densities of suspended algae have been consistently low for the period of record.

Water quality at this location continues to be excellent.

We hope your participation in Self Help continues in 1986.

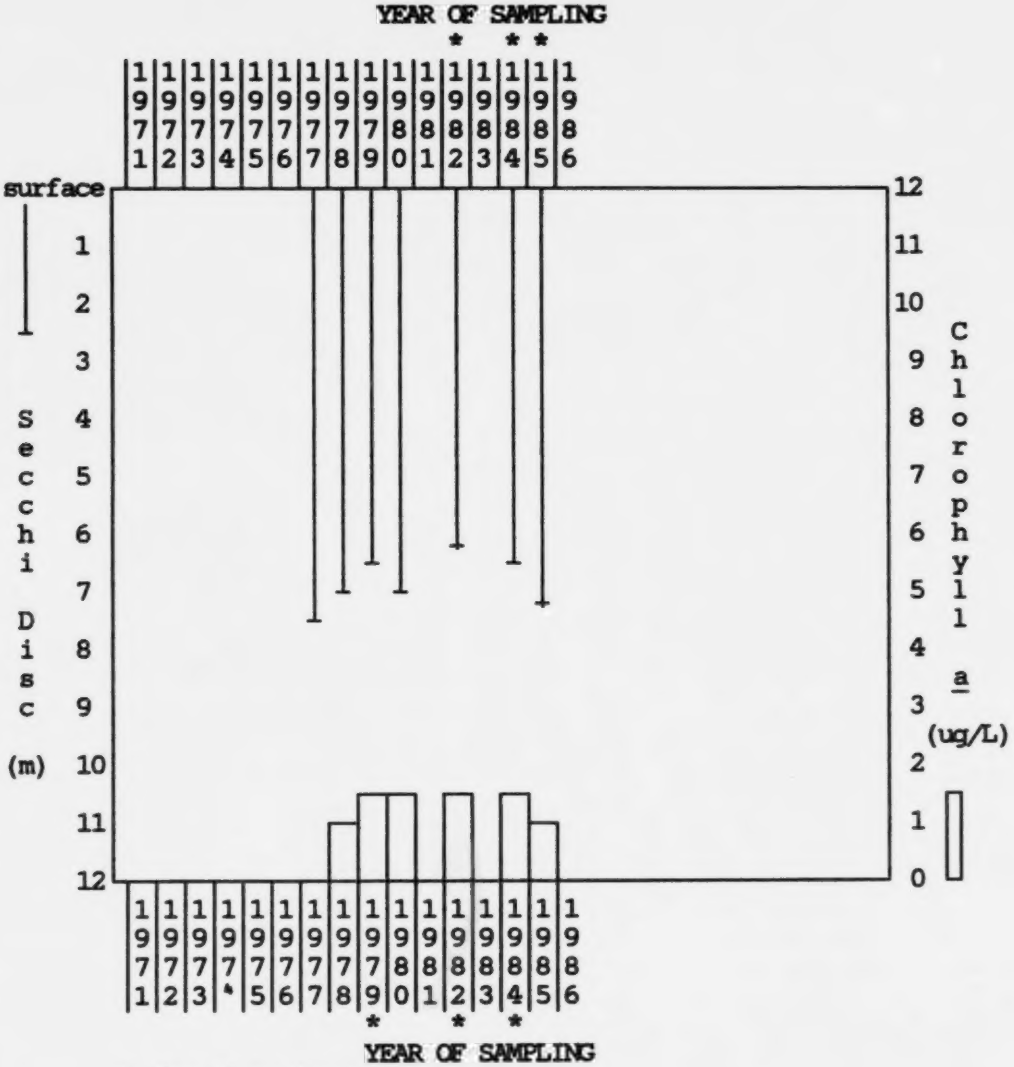
Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Lake of Bays (Station 6 Haystack Bay) from 1977 to 1985. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* based on 4 results

The 7 years of available data for Haystack Bay of Lake of Bays indicates that the degree of water clarity has been consistently high with Secchi disc readings ranging from 5.5 to 7 m.
Densities of suspended algae have been low for the period of record.
Water quality has been excellent at this location with no apparent changes since sampling began in 1977.
We hope you continue in the Self Help Program in 1986.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Lake of Bays (Station 7 Fairview Channel) from 1977 to 1985. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* based on 4 results

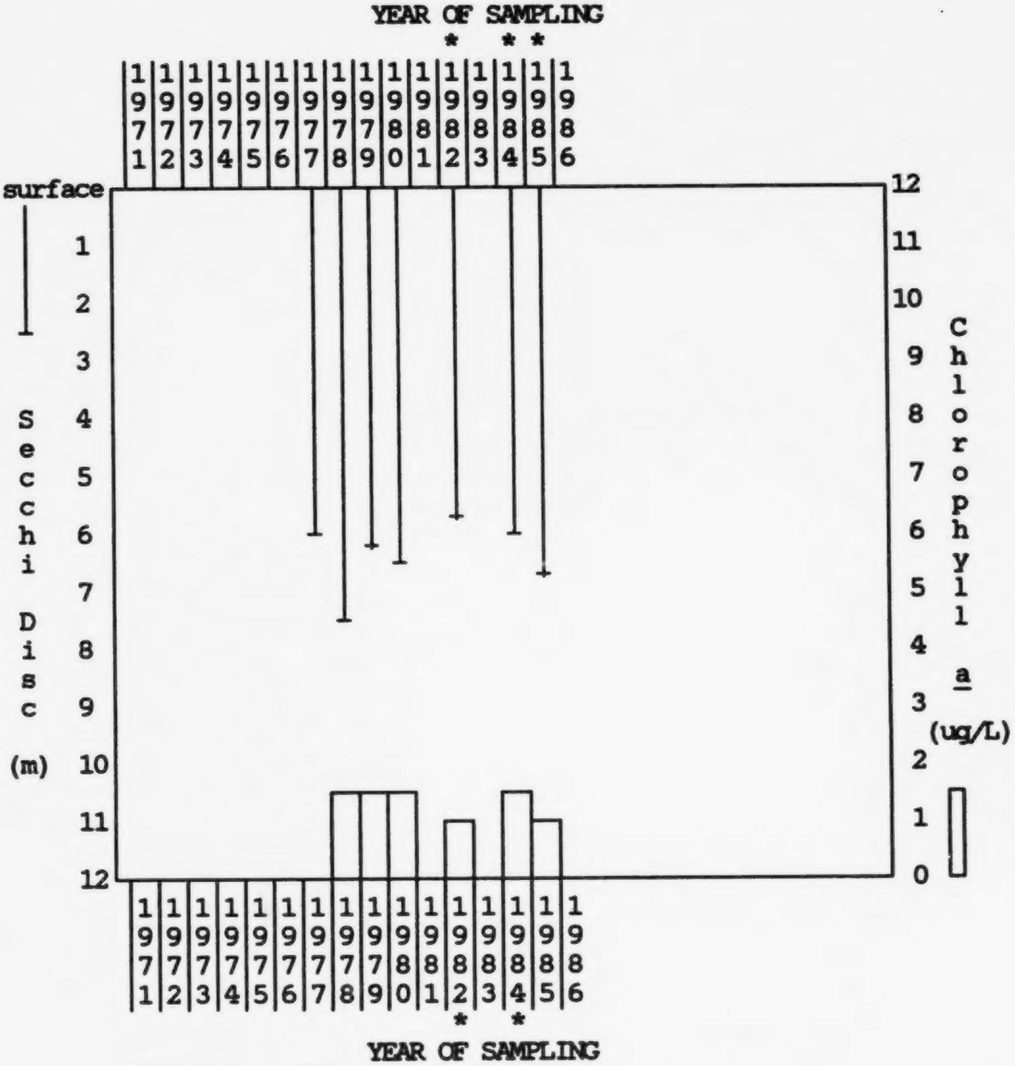
The 7 years of available information for Fairview Channel of Lake of Bays indicates that the water quality has been excellent for the period of record.

The degree of water clarity has been high with Secchi disc readings ranging from 6 to 7.5 m.

Densities of suspended algae have been consistently low since 1978.

We hope that you continue in the Self Help Program in 1986.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Lake of Bays (Station 10 Gull Island) from 1977 to 1985. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* based on 4 results

We now have 7 years of data available for the Gull Island station on Lake of Bays.

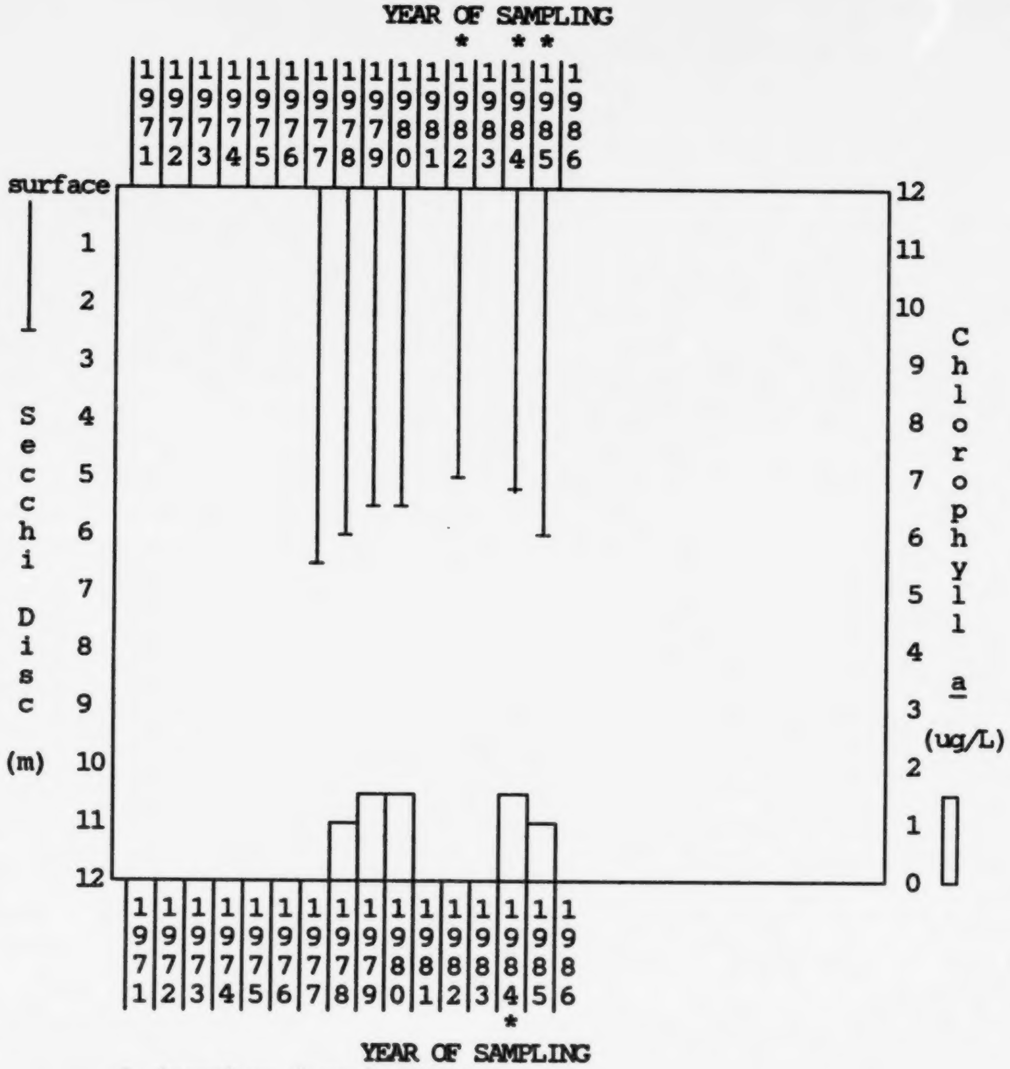
These results indicate that water quality has been excellent for the period of record with no overall changes observed.

The degree of water clarity has been high with average Secchi disc readings in the range of 5.5 to 7.5 m.

Densities of suspended algae have been low since 1978.

We hope that sampling continues in 1986.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Lake of Bays (Station 12 Dwight Bay) from 1977 to 1985. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results were required for graphing.



* based on 4 or 5 results

We have 7 years of data available for Dwight Bay of Lake of Bays. This information indicates that the degree of water clarity has been high for the period of record but not as high as other stations on this lake. Average Secchi disc readings have been within the range of 5 to 6.5 m.

Densities of suspended algae have been low since 1978.

Water quality in Dwight Bay continues to be very good with no overall changes observed for the period of record.

We hope you continue sampling in 1986.

Lake Muskoka

Township of Muskoka Lakes

District Municipality of Muskoka

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Lake Muskoka in 1985

Station	Bala Bay		Dudley Bay		North Bay		East Bay	
Date	S.D.	Chl.a	S.D.	Chl.a	S.D.	Chl.a	S.D.	Chl.a
Aug 5	3.5	L 1.0	4.0	1.2	4.5*	L 0.7*	- -	- -
Sept 2	5.5*	1.3*	5.5*	1.3*	6.0	1.3	6.0	1.4
	-----	-----	-----	-----	4.5*	1.6*	-----	----
					----	-----		

* - date not given L - less than

Insufficient sampling was done in 1985 to obtain meaningful results. In 1986, we recommend that the sampling frequency be increased to 6 times per year if possible. Please be sure to enter the sampling dates on the submission forms for all samples.

Figure 1: The relationship between Secchi disc and chlorophyll a for a number of recreational lakes in the province. All data are seasonal means.

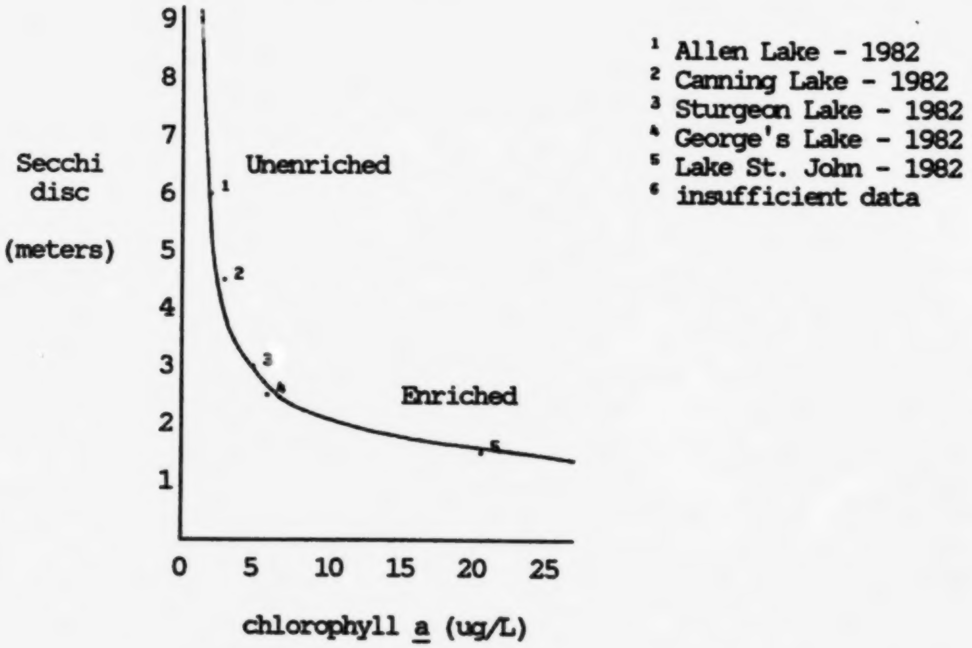
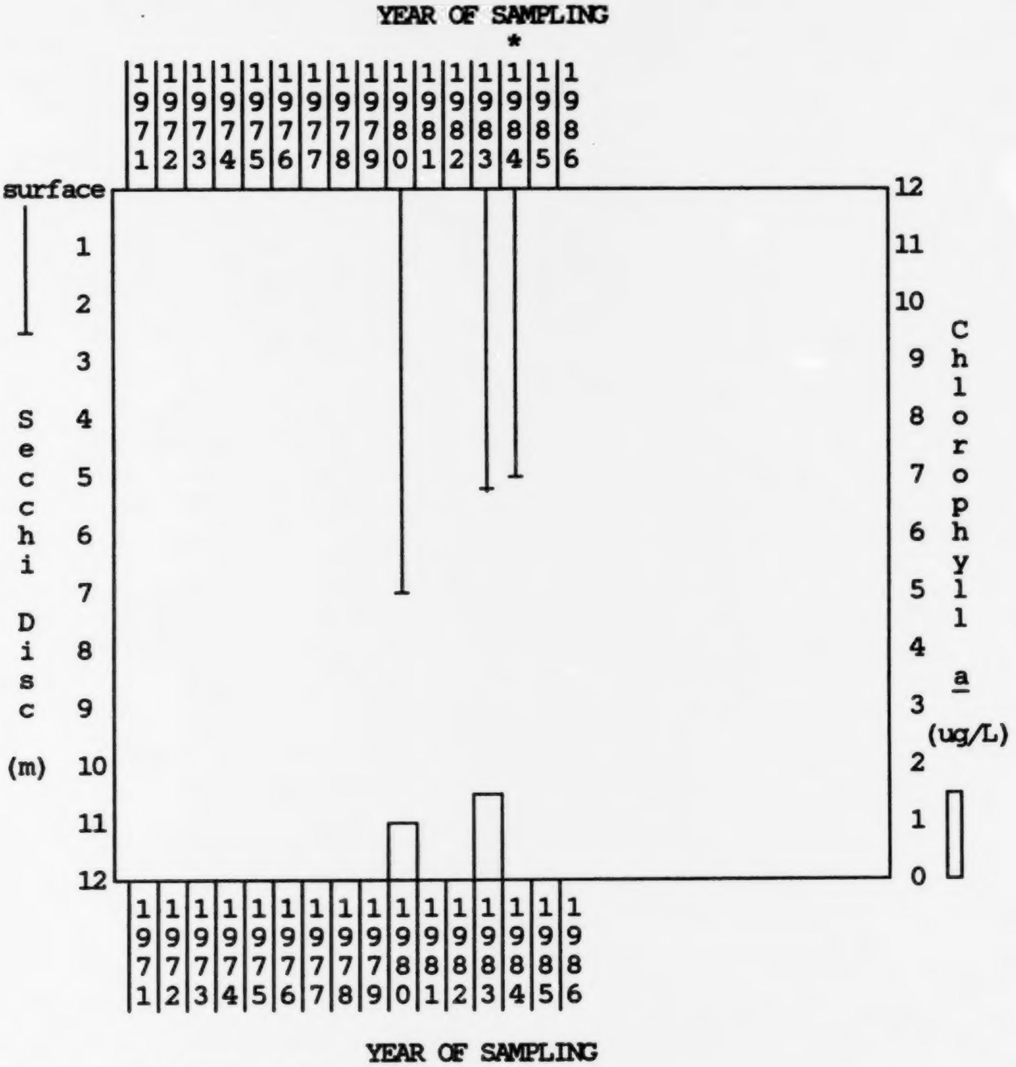


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Lake Muskoka (Bala Bay) from 1981 to 1985. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* based on 4 results

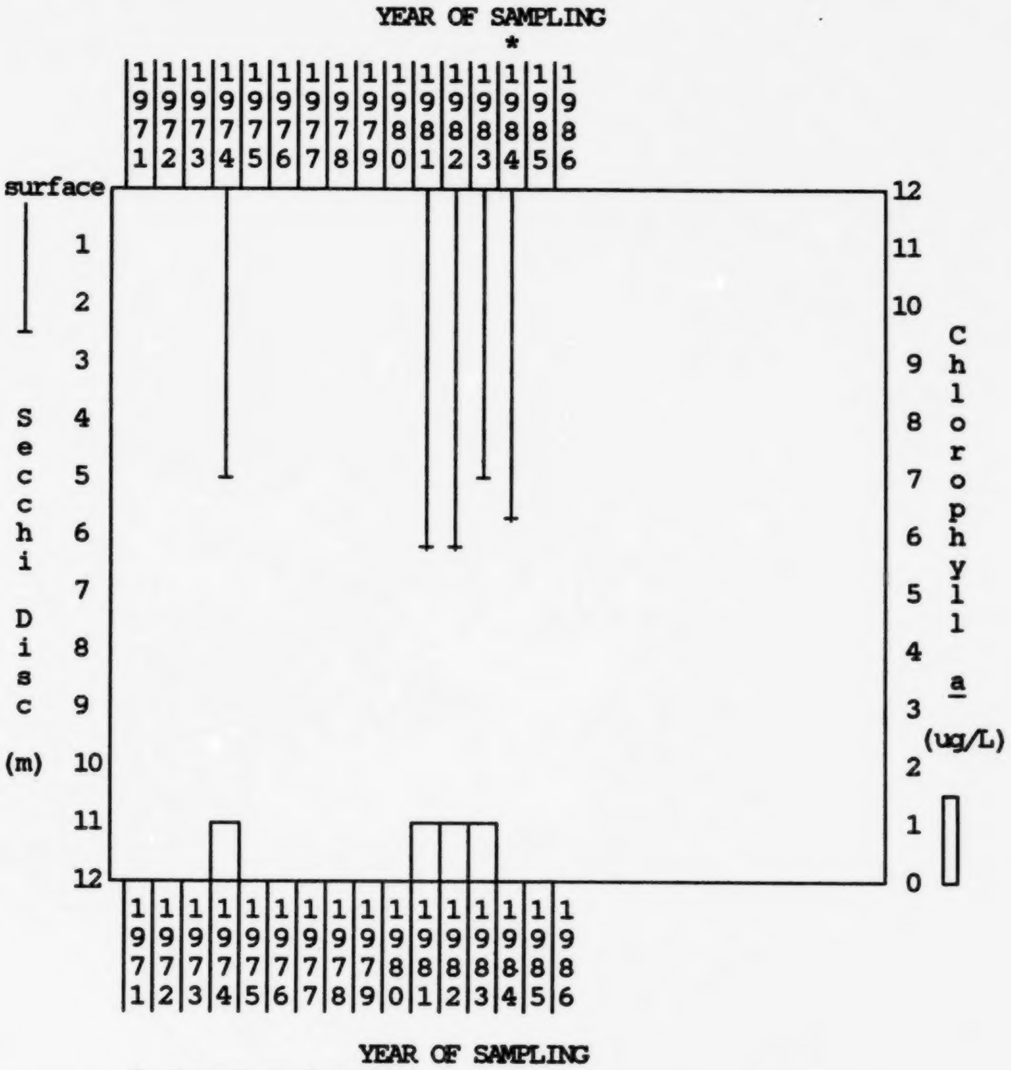
Insufficient sampling was done at this location in 1985 to include the data on the graph.

Previous data has indicated that the highest degree of water clarity was observed in 1980.

Densities of suspended algae have been low.

We hope that sampling is done in 1986 with increased sampling frequency.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Lake Muskoka (Dudley Bay) from 1974 to 1985. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.

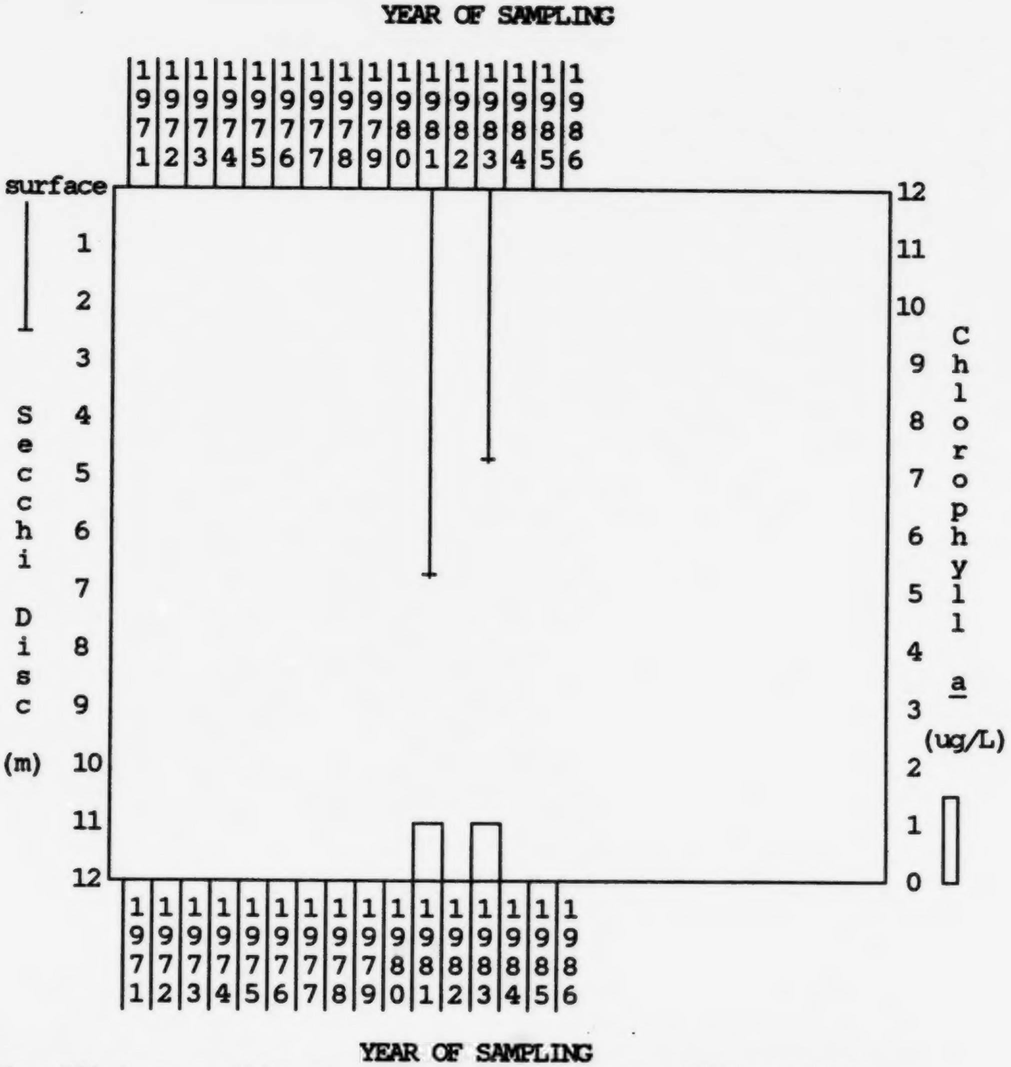


* based on 4 results

Insufficient sampling was done on Dudley Bay in 1985 to obtain meaningful results. Previous results have indicated a high degree of water clarity and low densities of suspended algae.

We hope that sampling continues in 1986 with increased sampling frequency.

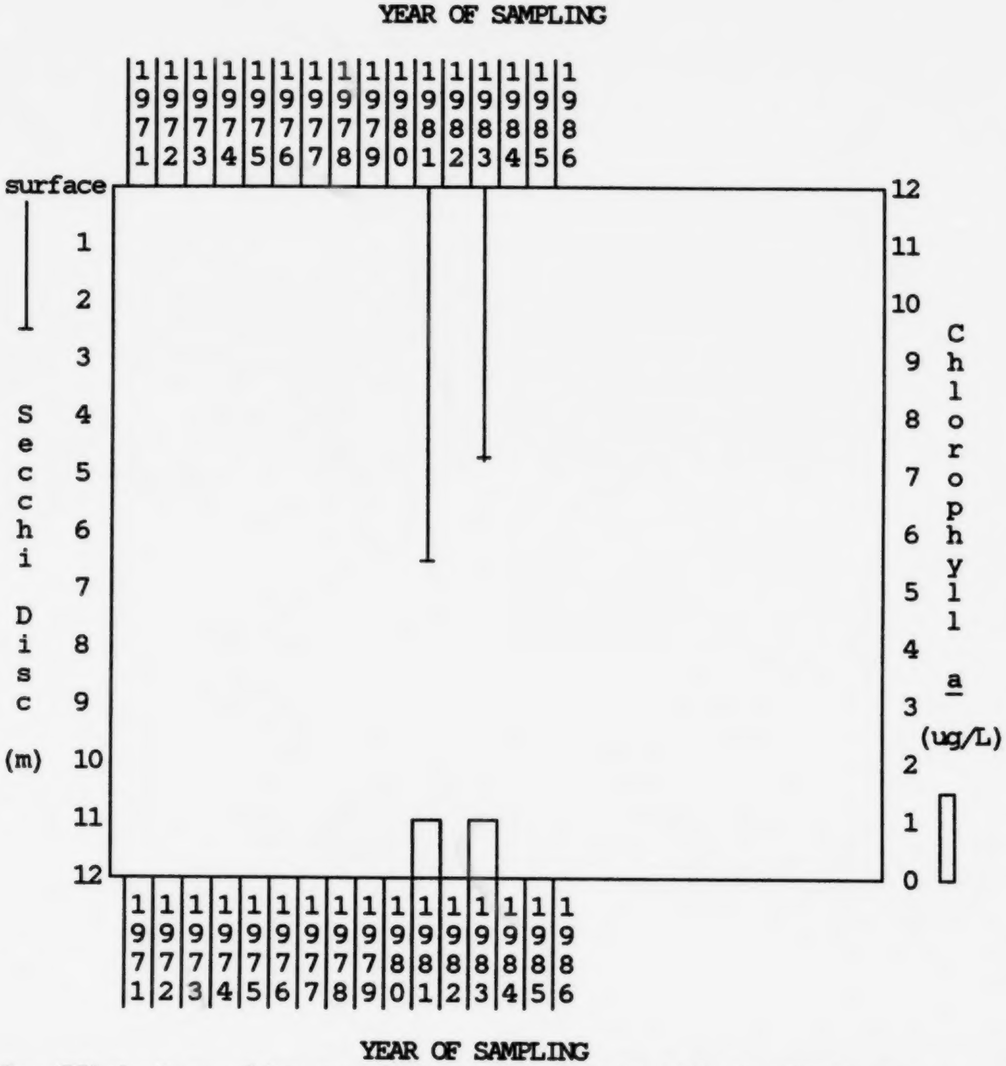
Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Lake Muskoka (North Bay) from 1981 to 1983. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



Insufficient sampling was done on North Bay in 1985 to obtain meaningful results. Past results indicate that the degree of water clarity ranges from high to moderately high and densities of suspended algae are low.

We hope that sampling is continued in 1986 with increased frequency.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Lake Muskoka (East Bay) from 1981 to 1983. Seasonal mean data (more than 6 sampling dates) only. A minimum of 4 results was required for graphing.



Insufficient sampling was done on East Bay in 1985 to obtain any meaningful results. Past results indicate that the degree of water clarity ranges from high to moderately high and densities of suspended algae are low.

We hope that sampling continues in 1986 with increased frequency.

Lake Rosseau

Township of Muskoka Lakes

District Municipality of Muskoka

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Lake Rosseau in 1985

Station	Arthurlie Bay		Skeleton Bay		Morgan's Bay	
Date	S.D.	Chl.a	S.D.	Chl.a	S.D.	Chl.a
Aug 1	- -	- -	- -	- -	7.0	T X

T X - more than 48 hours elapsed before sample received at lab so analysis unreliable

Insufficient sampling was done in 1985 to obtain meaningful results. If sampling is to continue in 1986, we recommend that sampling be done at least 6 times per station if possible. In addition, please be sure to enter the sampling date, Secchi disc readings and chlorophyll sample depths for all samples on the submission forms.

Figure 1: The relationship between Secchi disc and chlorophyll a for a number of recreational lakes in the province. All data are seasonal means.

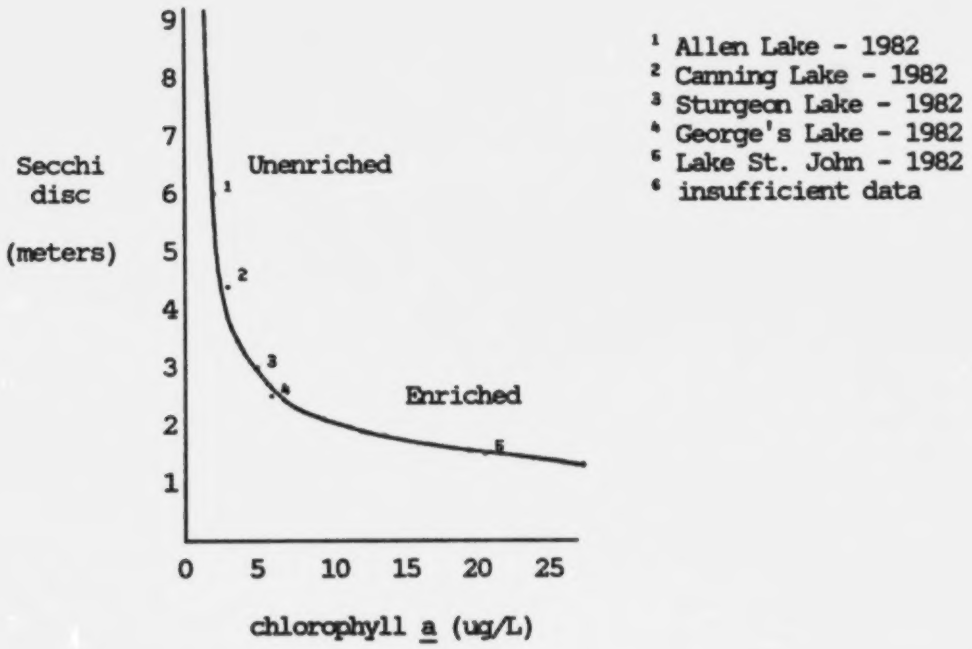
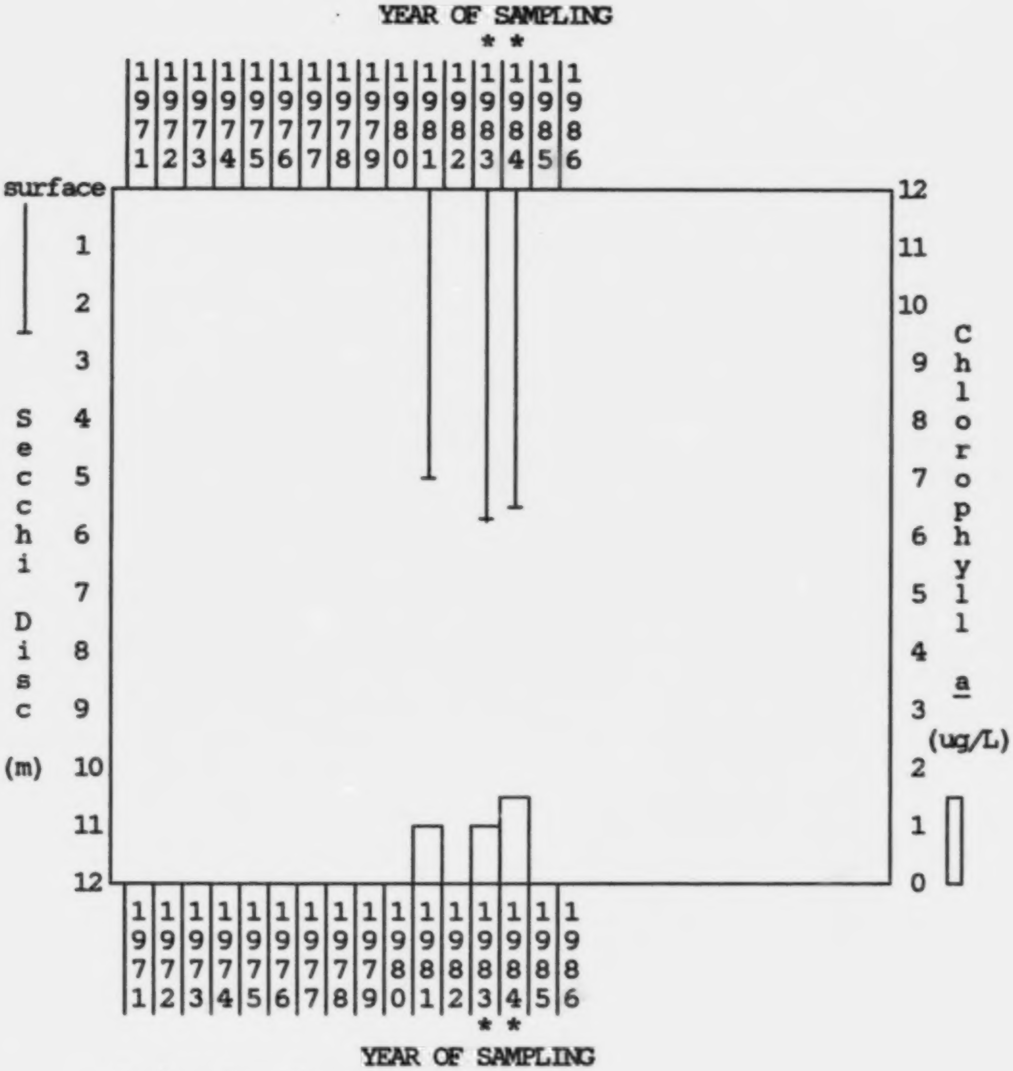


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll *a* (ug/L) from Lake Rosseau (Morgan's Bay) from 1981 to 1984. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* based on 4 or 5 results

Insufficient sampling was done on Morgan's Bay of Lake Rosseau in 1985 to obtain meaningful results. Past results indicate a high degree of water clarity and low densities of suspended algae.

We hope that sampling continues in 1986 with increased frequency.

Lake Scugog

Township of Scugog

Regional Municipality of Durham

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Lake Scugog in 1985

Station	Williams Point (S-13)		West Shore South End (S-15)	
Date	S.D.	Chl.a	S.D.	Chl.a
May 26	- -	- -	2.09	4.7
June 9	0.4	9.5	2.04	6.9
June 16	0.5	12.0	2.01	5.3
June 23	- -	- -	2.01	7.7
July 1	0.3	9.6	2.02	7.8
July 29	0.4	20.1	- -	- -
Aug 12	0.5	28.1	- -	- -
Aug 26	0.5	34.3	- -	- -
	0.4	18.9	2.03	6.5

In 1985, sampling at Williams Point was done on 6 occasions and the South end was done on 5 occasions.

Secchi disc readings at Williams Point averaged 0.4 m indicating a very low degree of water clarity.

Chlorophyll a levels at this station were very high averaging 18.9 ug/L.

At the South end, the degree of water clarity was higher with an average Secchi disc reading of 2.03 m. Densities of suspended algae were still high but not as high as Williams Point.

These results indicate that Lake Scugog is enriched with nutrients and has very high densities of suspended algae in certain locations.

Figure 1: The relationship between Secchi disc and chlorophyll a for Lake Scugog in 1985 and a number of recreational lakes in the province. All data are seasonal means.

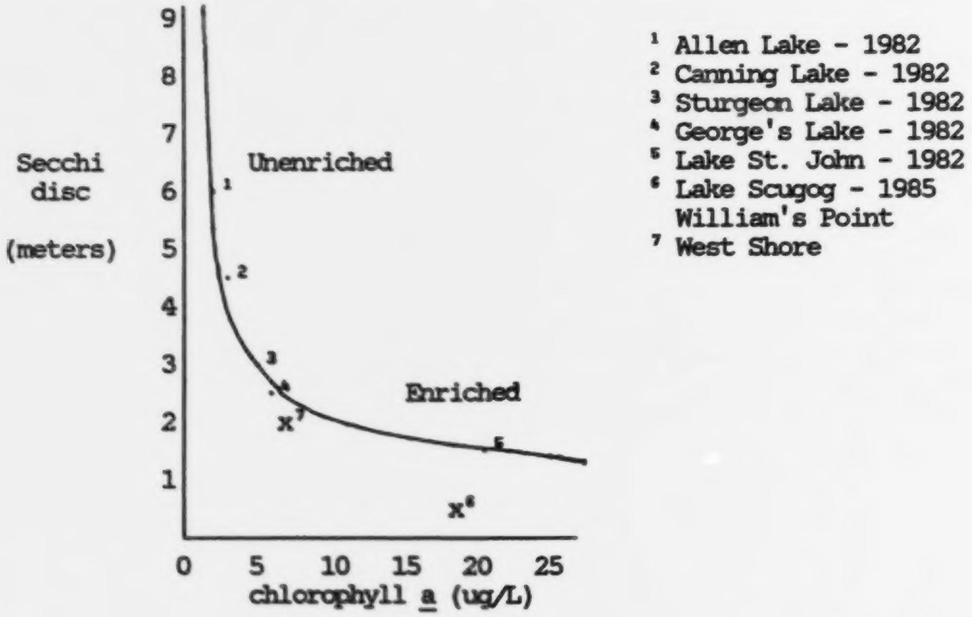
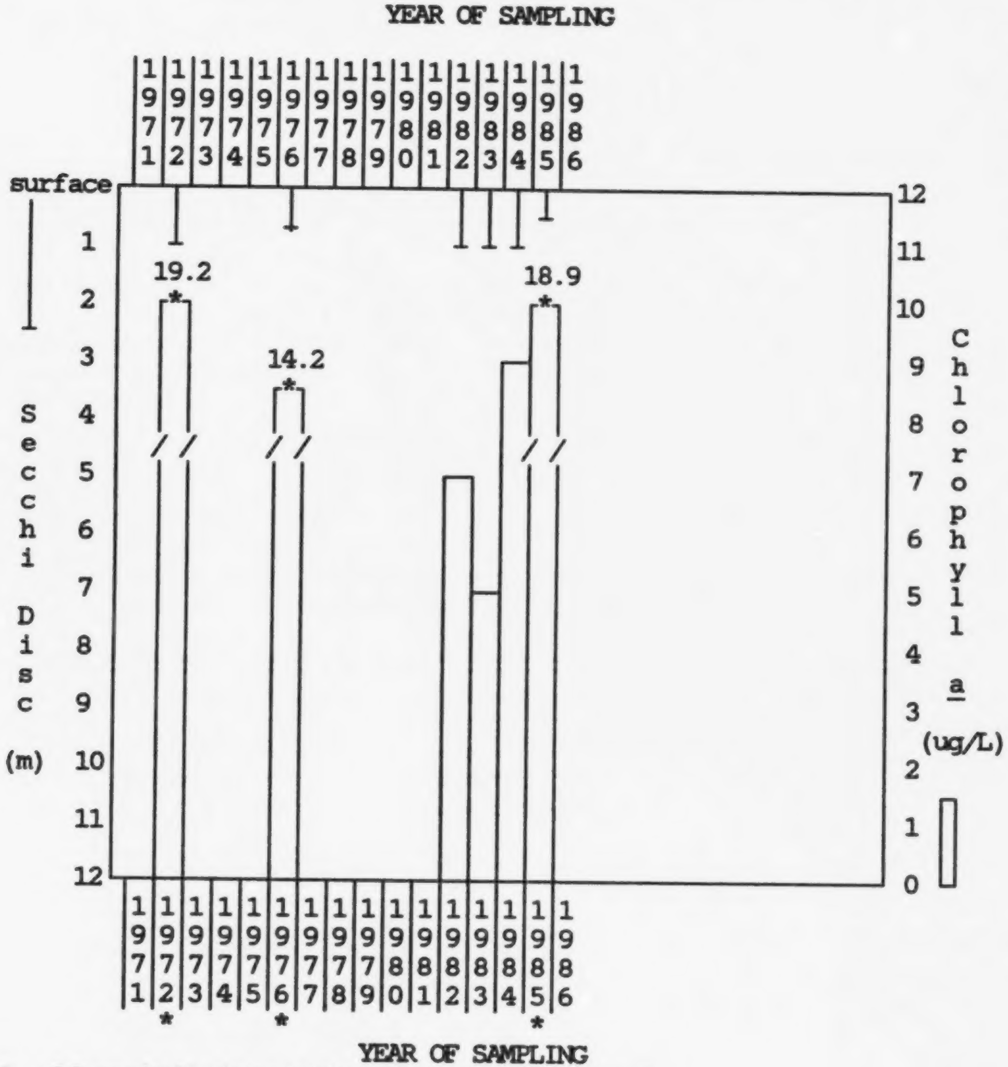


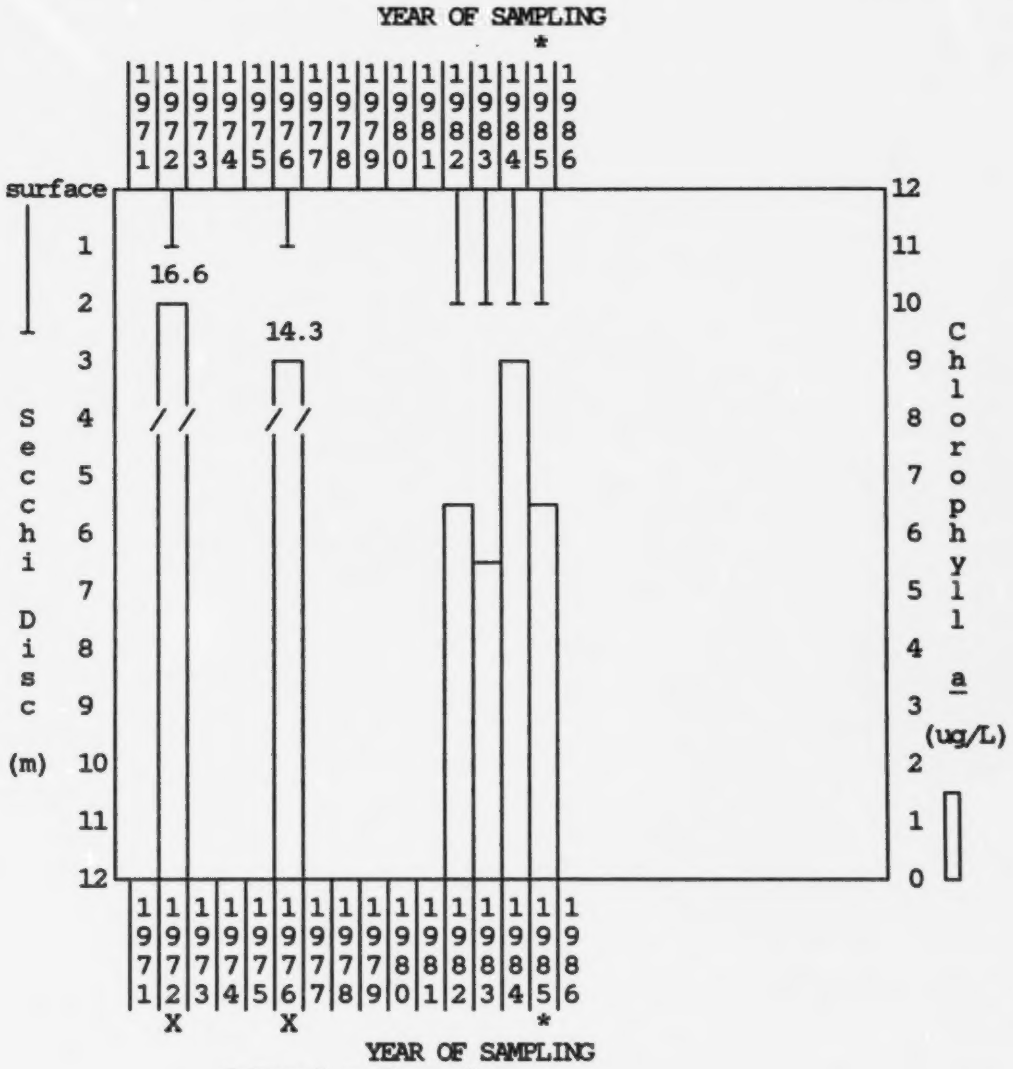
Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Lake Scugog (William's Point) from 1972 to 1985. Seasonal mean data (more than 6 sampling dates) only. A minimum of 4 results was required for graphing.



* chlorophyll data higher than scale of graph

The 6 years of data available for Williams Point of Lake Scugog indicate that the degree of water clarity has been consistently low and densities of suspended algae have been high with frequent blooms. These conditions are typical of very enriched lake conditions. We hope that sampling continues in 1986.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Lake Scugog (West Shore South End) from 1972 to 1985. Seasonal mean data (more than 6 sampling dates) only. A minimum of 4 results were required for graphing.



* Based on 5 samples.

X Chlorophyll data higher than scale of graph

The 6 years of data available for the West Shore South End station of Lake Scugog indicates that the degree of water clarity has been consistently low with the lowest average Secchi disc readings observed in 1972 and 1976. This corresponded to the highest observed densities of suspended algae.

The water quality at this location continues to be characteristic of enriched lake conditions.

We hope that sampling continues in 1986.

Lake St. John

Township of Rama

County of Simcoe

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Lake St. John in 1985

Station	Main	
Date	S.D.	Chl.a
May 27	3.5	1.0
June 9	4.0	1.1
June 23	1.25	4.4
Aug 5	1.0	10.8
Aug 17	1.0	17.0
Sept 8	1.0	15.2
	-----	-----
	2.0	8.3
	-----	-----

A good sampling program was done on Lake St. John in 1985 with 6 sampling dates. Secchi disc readings were moderately high in May and early June and decreased in late summer. The average reading of 2.0 m indicated a low degree of water clarity. Chlorophyll a concentrations were low in May and early June and increased to high levels in late summer. The average concentration of 8.3 ug/L indicated high densities of suspended algae. Based on the 1985 results, Lake St. John would be considered enriched with low water clarity and periodically high densities of suspended algae.

Figure 1: The relationship between Secchi disc and chlorophyll a for Lake St. John in 1985 and a number of recreational lakes in the province. All data are seasonal means.

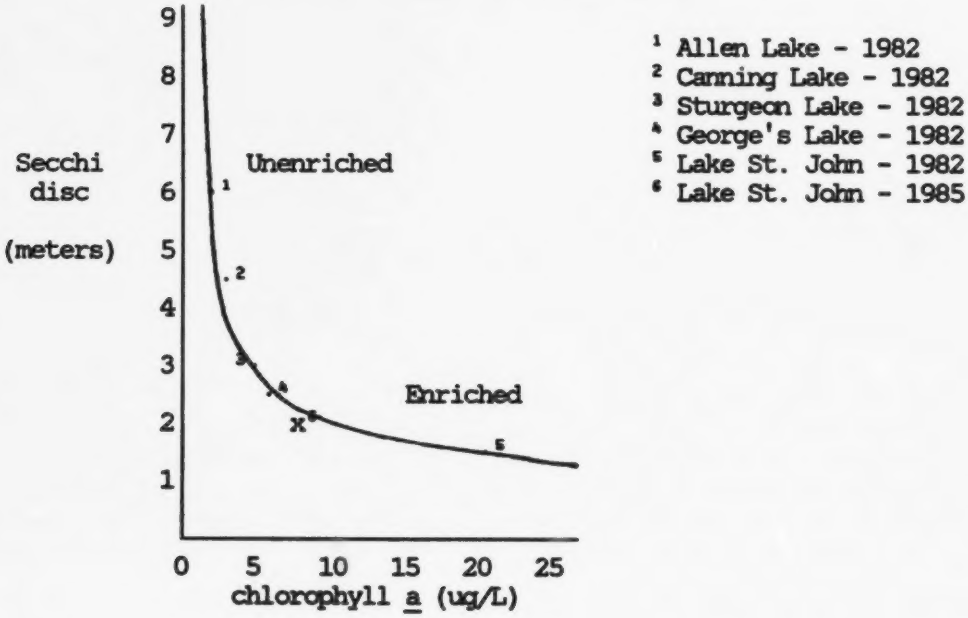
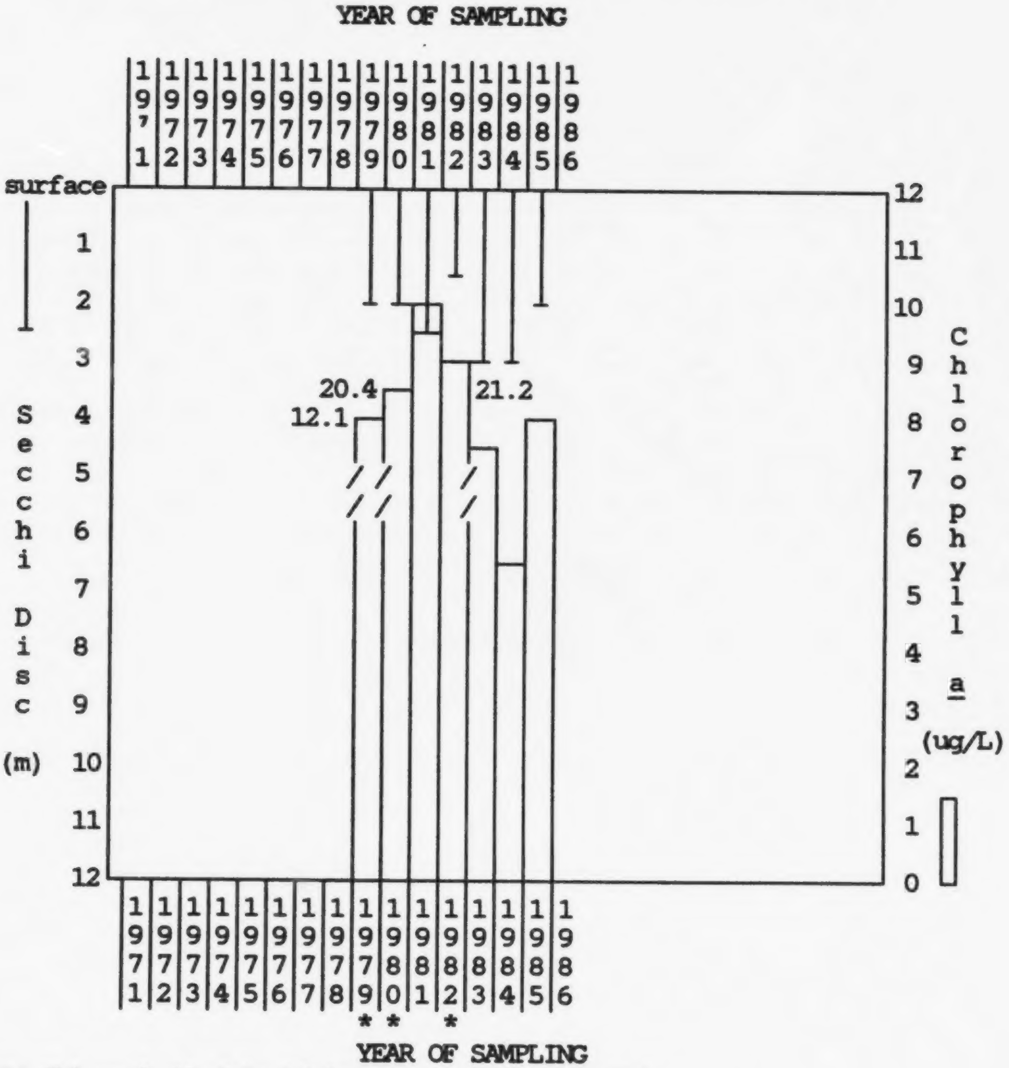


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Lake St. John from 1979 to 1985.
Seasonal mean data (more than 6 sampling dates) only.
A minimum of 4 results was required for graphing.



* Chlorophyll data higher than scale of graph

The 7 years of available data from Lake St. John indicates that the degree of water clarity has been consistently low and the densities of suspended algae have been high with frequent algae blooms.

These characteristics reflect enriched lake conditions. Since 1983, densities of suspended algae have been somewhat lower than in previous years.

We hope you continue sampling in 1986.

Leech Lake

Oakley Ward

District Municipality of Muskoka

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Leech Lake in 1985

Station	North Bay		East Bay		West Bay	
Date	S.D.	Chl.a	S.D.	Chl.a	S.D.	Chl.a
June 9	3.5	3.8	3.5	4.5	3.75	3.8
July 1	4.0	4.0	4.5	3.9	4.25	3.1
July 28	4.25	1.9	4.25	2.9	4.5	3.1
Aug 5	5.5	3.6	5.0	4.7	5.5	1.5
Aug 11	4.25	1.9	4.5	1.4	4.5	2.5
Sept 2	3.75	10.7	4.0	5.8	4.0	4.6
Sept 15	4.0	4.9	4.0	4.3	4.0	5.2
Sept 22	3.75	5.1	3.5	10.7	3.75	4.7
Oct 6	4.0	6.5	4.0	7.2	3.75	7.8
Oct 14	4.0	4.1	4.0	5.6	4.0	4.7
	-----	-----	-----	-----	-----	-----
	4.1	4.7	4.1	5.1	4.2	4.1

An excellent sampling program was done on Leech Lake in 1985 with sampling done on 10 occasions. The degree of water clarity at all 3 stations was moderately high with average Secchi disc readings ranging from 4.1 m in North and East Bay to 4.2 m at West Bay.

Densities of suspended algae were high at all 3 stations with average chlorophyll a concentrations ranging from 4.1 ug/L in West Bay to 5.1 ug/L in East Bay. One sampling station would likely be sufficient on this lake since the water quality is similar at all 3 stations sampled in 1985. Water quality of Leech Lake in 1985 would be considered moderately enriched to enriched.

Figure 1: The relationship between Secchi disc and chlorophyll a for Leech Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means.

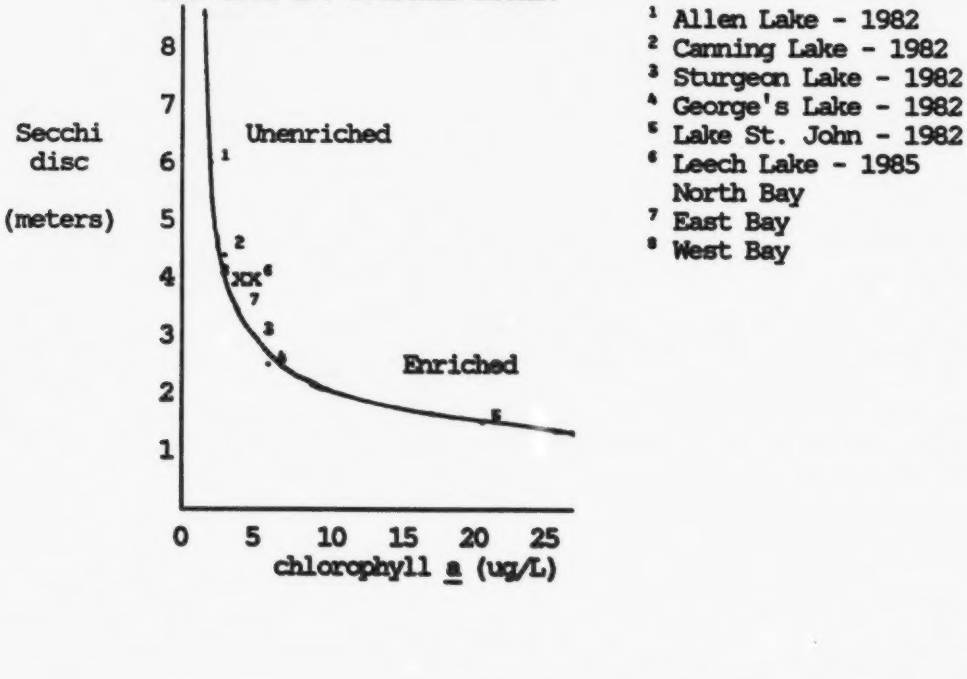
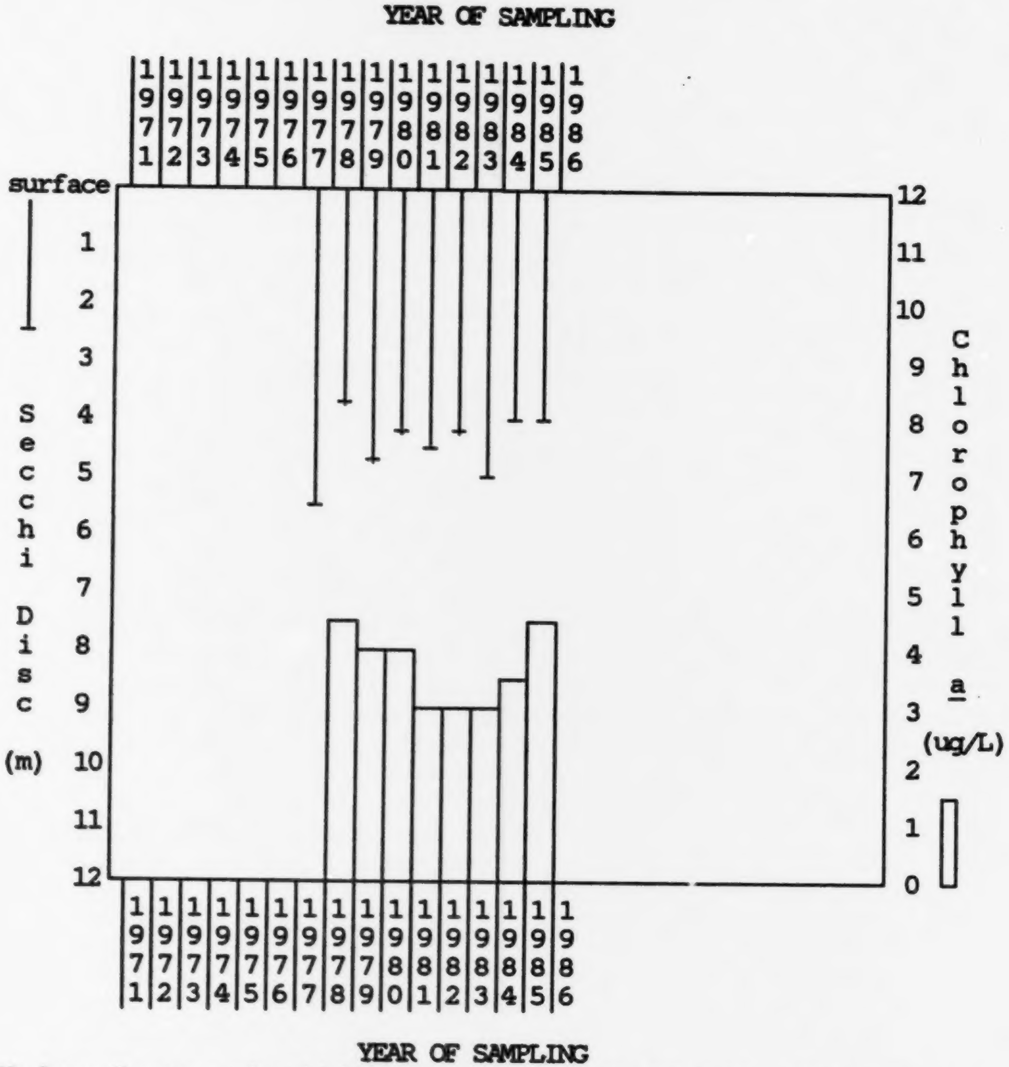


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Leech Lake (North Bay) from 1977 to 1985. Seasonal mean data (more than 6 sampling dates) only.



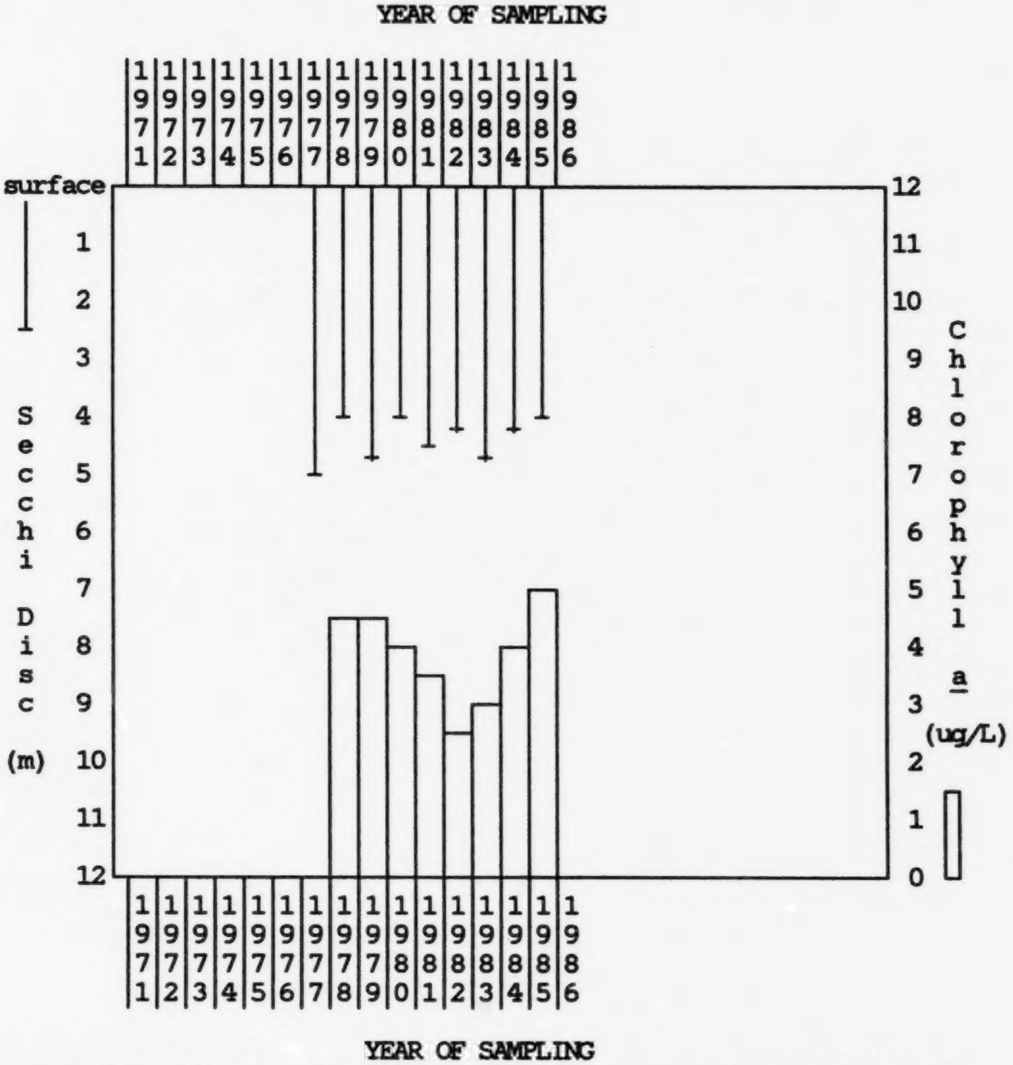
We have 9 years of reliable seasonal average data for North Bay of Leech Lake.

The degree of water clarity has been moderately high for most of the period of record with occasions, such as 1977, when the clarity is high.

The densities of suspended algae have usually been moderately high, however, in 1978 and 1985 average chlorophyll a concentrations were high.

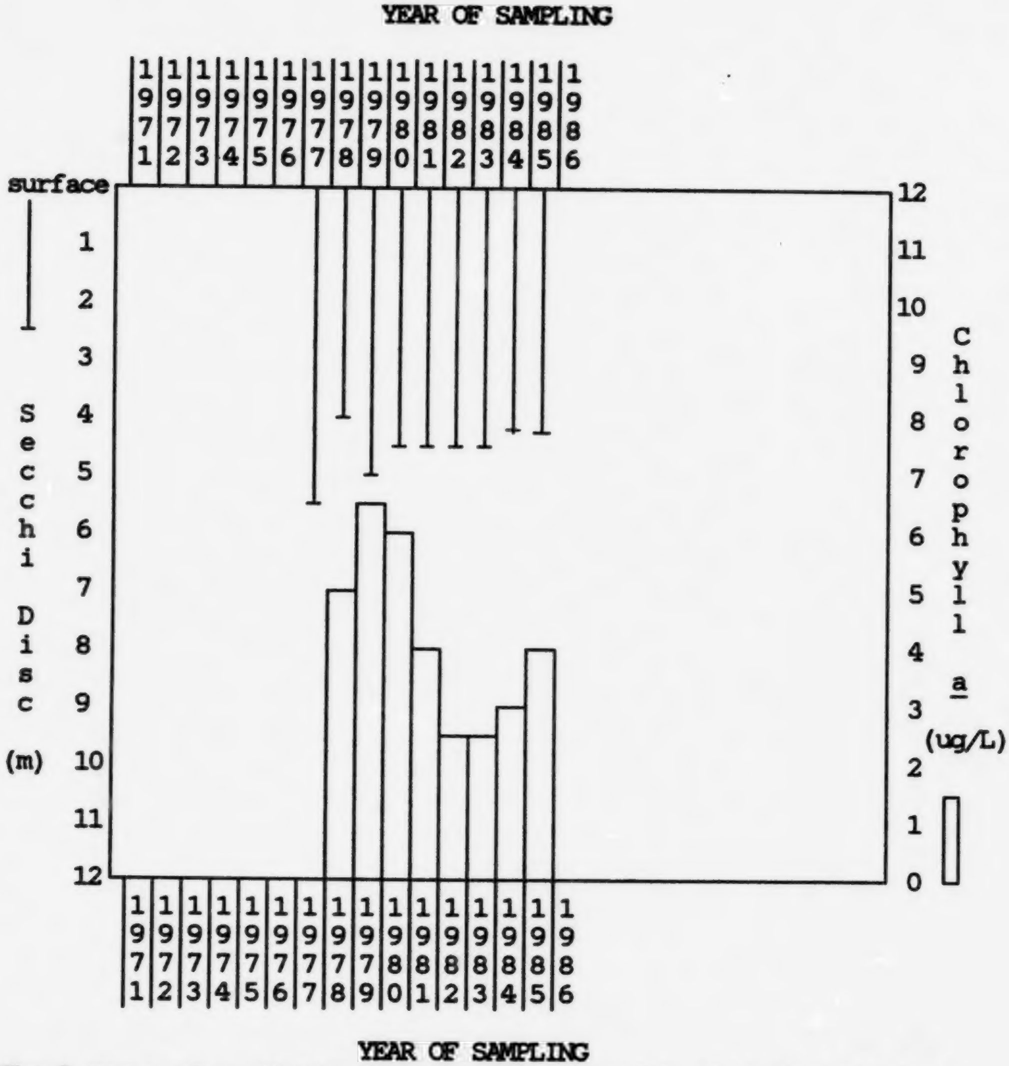
There has been no overall change in water quality at this location since 1977. We hope you continue your excellent participation in this program in 1986.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Leech Lake (East Bay) from 1977 to 1985. Seasonal mean data (more than 6 sampling dates) only.



We now have 9 years of reliable seasonal average data available for East Bay of Leech Lake. These results indicate that there have been no overall changes in water quality at this location since 1977. The degree of water clarity has been moderately high for the period of record with Secchi disc readings ranging from 4 to 5 m. Densities of suspended algae have fluctuated from moderately low in 1982 to high in 1978, 1979 and 1985. These results indicate that East Bay of Leech Lake can support periodically high densities of suspended algae. We hope that sampling continues in 1986.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Leech Lake (West Bay) from 1977 to 1985. Seasonal mean data (more than 6 sampling dates) only.



The 9 years of available data for West Bay of Leech Lake indicates moderately enriched conditions.

The degree of water clarity has been moderately high for most of the period of record with occasions when the clarity is high.

Densities of suspended algae fluctuate from moderately low to high, typical of moderately enriched conditions.

Based on the historical record of water quality, there has been no overall change in water quality at this location since 1977 but there is a higher degree of annual fluctuation particularly with chlorophyll a concentrations.

We hope that your excellent participation in this program continues in 1986.

Little Glamor Lake

Monmouth & Glamorgan Townships

County of Haliburton

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Little Glamor Lake in 1985.

Station	Centre	
Date	S.D.	Chl.a
June 9	2.5	4.0
July 1	2.9	4.1
Aug 5	3.0	6.0
	-----	-----

Insufficient sampling was done in 1985 to obtain reliable seasonal means. Based on the 3 occasions when sampling was done, Little Glamor Lake had a low degree of water transparency with Secchi disc readings ranging from 2.5 to 3.0 m.
Chlorophyll a concentrations were high, ranging from 4.0 to 6.0 ug/L indicating high densities of suspended algae.
Little Glamor Lake appears to be an enriched lake.

Figure 1: The relationship between Secchi disc and chlorophyll a for a number of recreational lakes in the province.

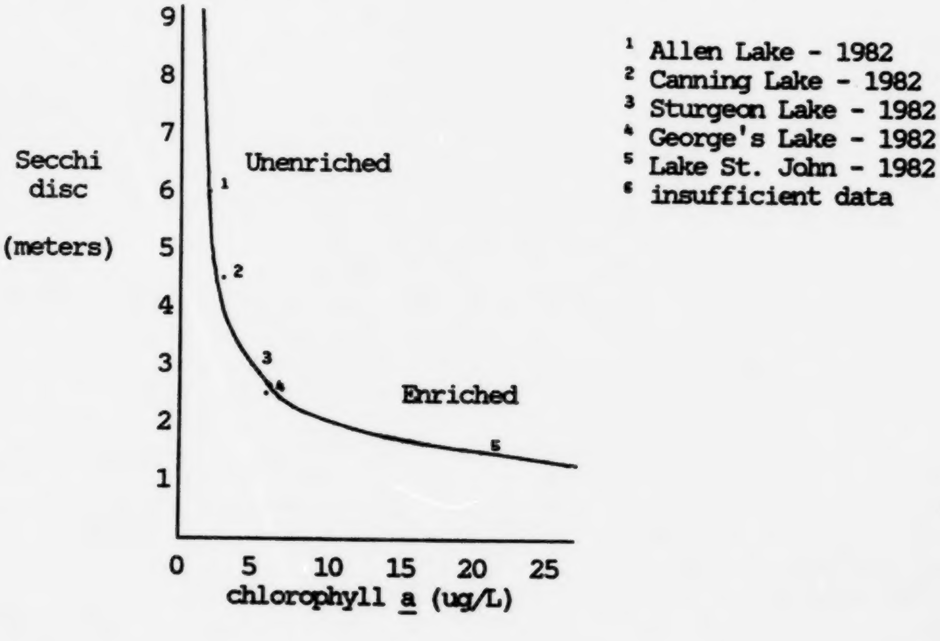
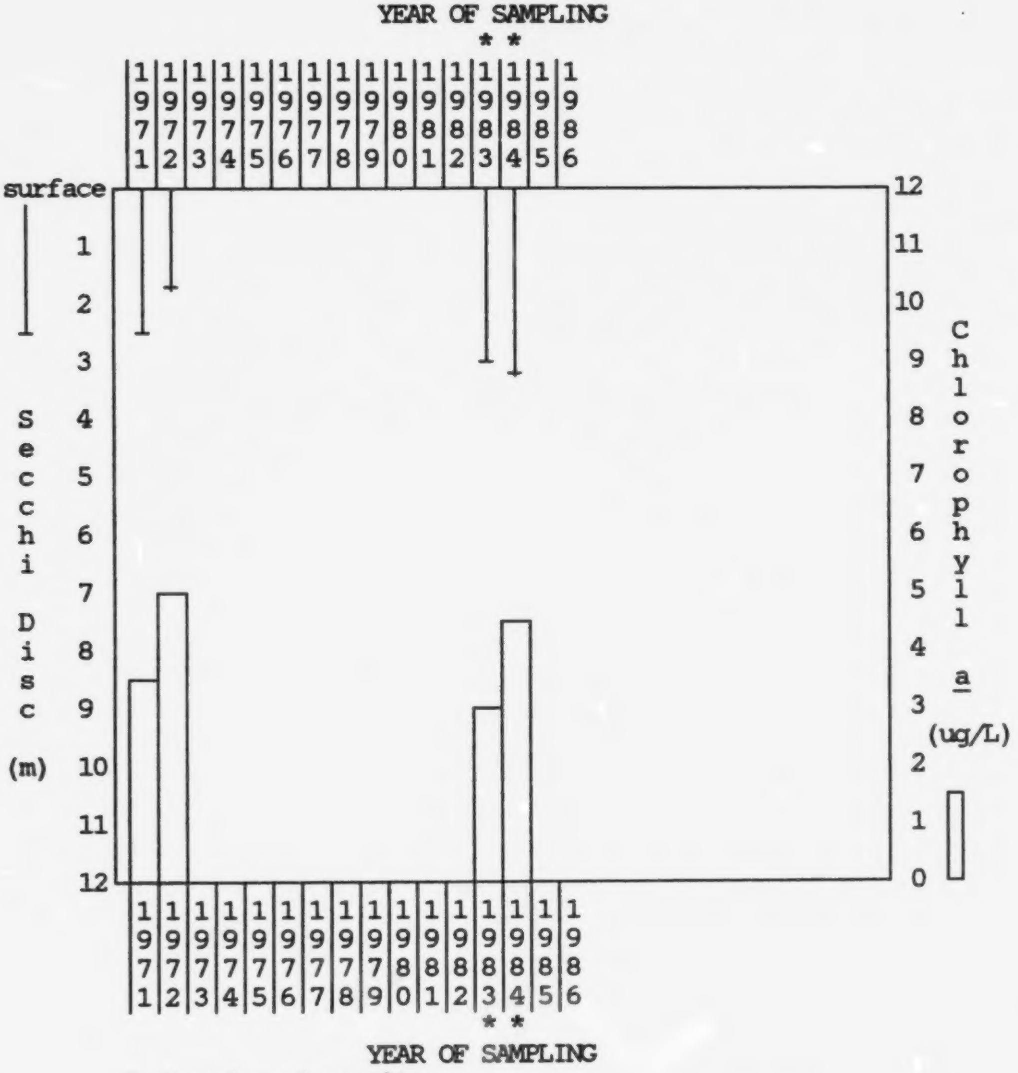


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Little Glamor Lake from 1971 to 1984. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* based on 4 results

Insufficient sampling was done in 1985 to obtain reliable results, however, past results indicate that there has been no significant change in water quality since 1971.

The degree of water clarity was low in 1971 and 1972 and slightly higher in 1983 and 1984.

Densities of suspended algae have fluctuated from moderate to high.

Water quality of Little Glamor Lake appears to be borderline between moderately enriched and enriched.

We hope that sampling continues in 1986 with increased sampling frequency.

Little Kennisis Lake

Havelock Township

County of Haliburton

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Little Kennisis Lake in 1985

Station	Main	
Date	S.D.	Chl.a
July 28	4.0	1.9
Aug 11	4.0	2.2
Aug 18	4.0	2.3
Sept 2	4.0	1.1
Oct 14	N G	1.0
	-----	-----
	4.0	1.7
	-----	-----

N G - Secchi disc reading not given

Little Kennisis Lake was sampled on 5 occasions in 1985.
Based on the results available, the degree of water transparency was moderate and the densities of suspended algae were low.
Little Kennisis Lake would be considered unenriched with good water quality.
In 1986, please be sure to enter the Secchi disc readings on the submission forms for all samples.

Figure 1: The relationship between Secchi disc and chlorophyll a for Little Kennisis Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means except for Little Kennisis Lake.

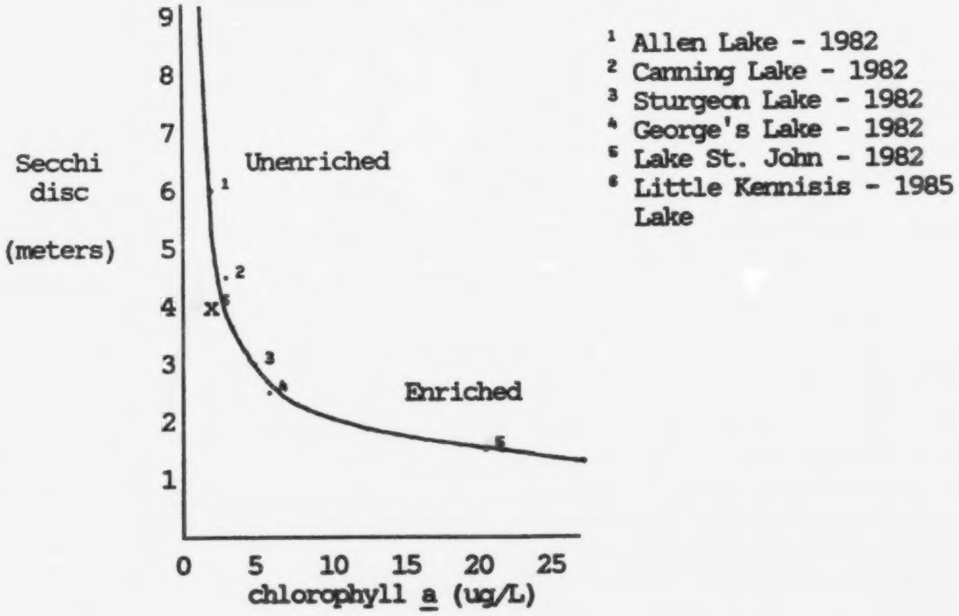
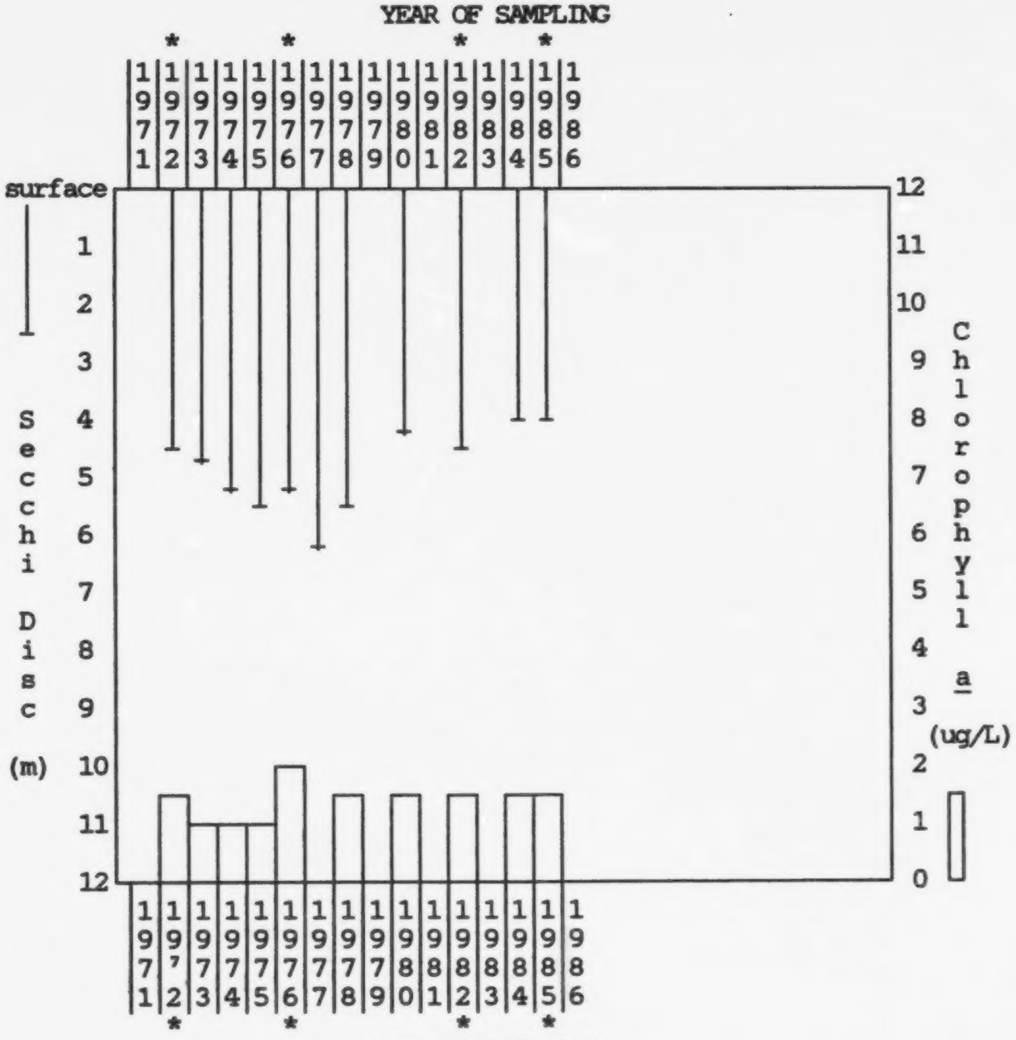


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Little Kennisis Lake from 1972 to 1985. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* based on 4 or 5 results

A very good historical record of water quality has been established for Little Kennisis Lake with 11 years of data available.
The degree of water clarity has ranged from moderately high to high during the period of record. The highest average Secchi disc readings occurred from 1974 to 1978 and the clarity in recent years has been lower with average Secchi disc readings ranging from 4 to 4.5 m.
The reason for the apparent decline in water clarity in recent years is not apparent since the densities of suspended algae have remained low for most of the period of record.
We hope that sampling is continued on Little Kennisis Lake in 1986.

Little Lake

Cramahe Township

Northumberland County

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Little Lake in 1985

Station	Centre	
Date	S.D.	Chl.a
July 27	1.5	T X
Aug 11	1.9	3.2
	-----	-----

T X - sample more than 4 days old when received at lab

Insufficient sampling was done on Little Lake in 1985 to obtain any meaningful results. The 2 results obtained indicated a low degree of water clarity and moderate densities of suspended algae.
If sampling is done in 1986, we recommend a greater sampling frequency with sampling done on Sunday for delivery to the lab on Monday.

Figure 1: The relationship between Secchi disc and chlorophyll a for a number of recreatinal lakes in the province. All data are seasonal means.

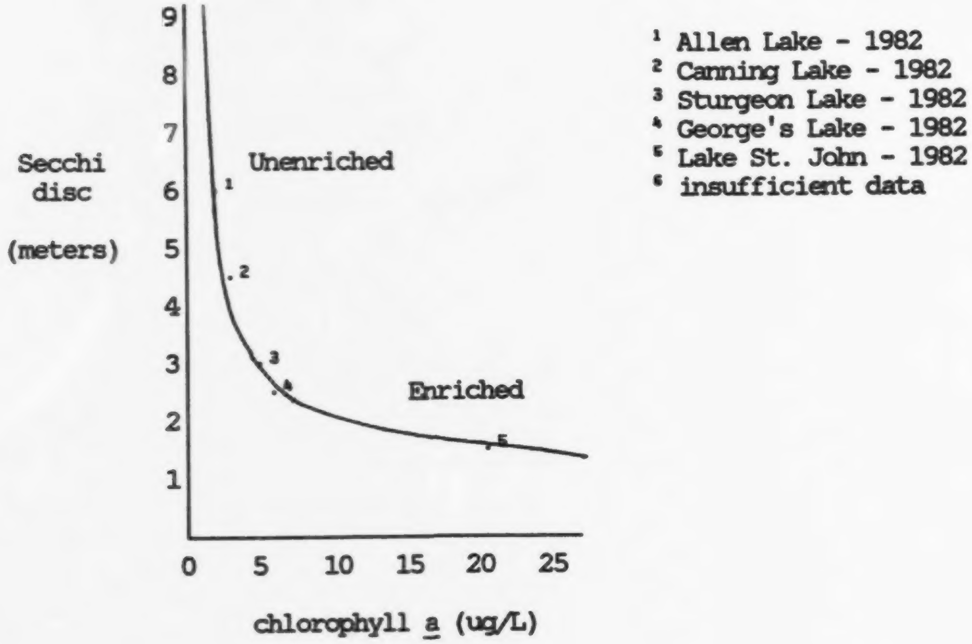
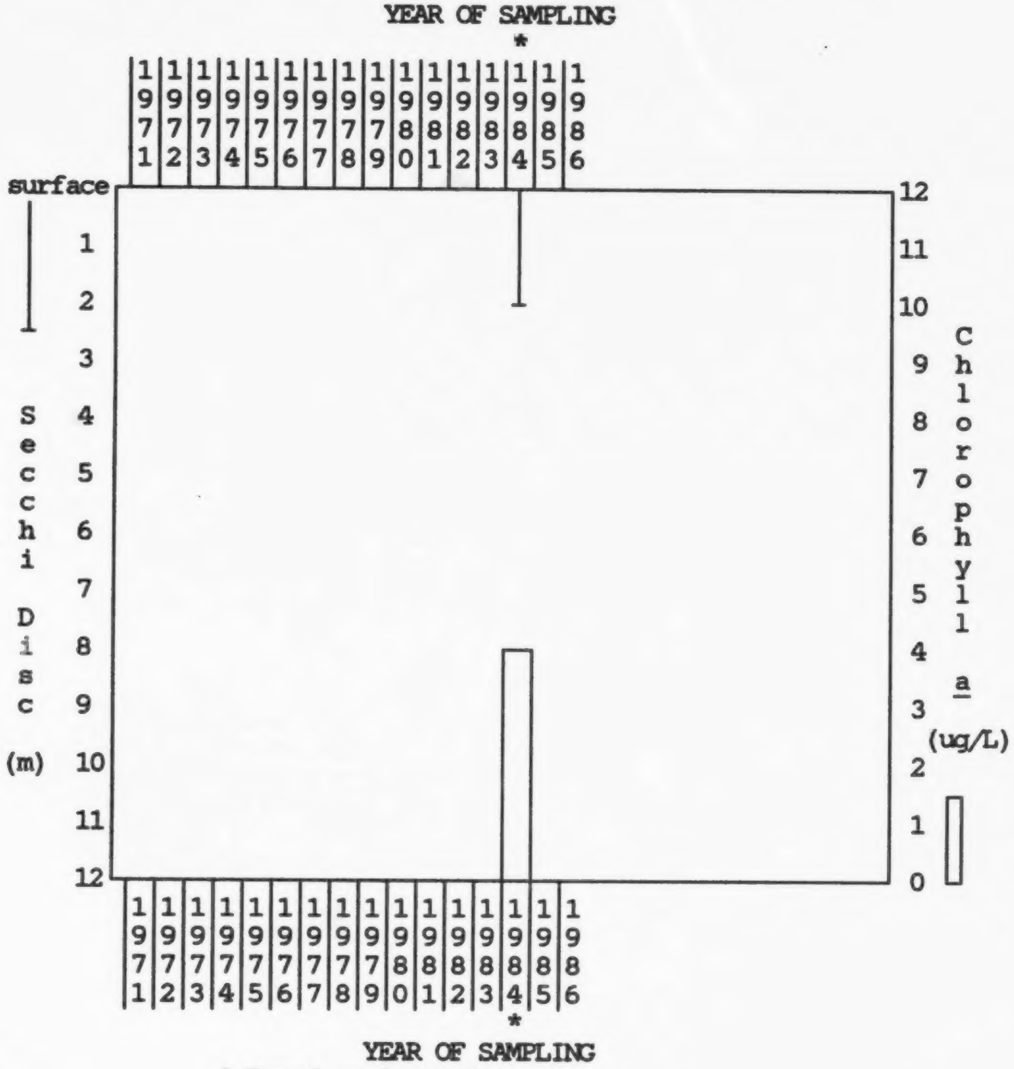


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Little Lake from 1984.
Seasonal mean data (more than 6 sampling dates) only.
A minimum of 4 results were required for graphing.



* Based on 4 samples.

Insufficient sampling was done in 1985 to obtain reliable results. We hope that sampling is done in 1986 with increased sampling frequency.

Little Straggle Lake

Harcourt Township

County of Haliburton

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Little Straggle Lake in 1985

Station Date	Main S.D.	 Chl.a
June 23	4.0	4.2*
July 1	4.0	2.4*
July 28	3.4	1.5*
Aug 11	4.9	1.4*
Aug 25	3.6	2.4*
Sept 2	4.0	2.5
Sept 29	5.0	1.6*
Oct 6	5.0	2.4*
	-----	-----
	4.2	2.3
	-----	-----

* - chlorophyll samples not taken through a depth of twice Secchi disc reading

An excellent sampling program was done on Little Straggle Lake in 1985 with sampling done on 8 occasions. Secchi disc readings ranged from 3.4 m to 5.0 m and averaged 4.2 m indicating a moderately high degree of water clarity. Chlorophyll a concentrations were moderately low for most of the sampling period except for Oct. 6 when high densities of suspended algae were observed. The average chlorophyll a concentration was 2.3 ug/L indicating moderately low densities of suspended algae.

Based on the seasonal averages, Little Straggle Lake would be considered moderately enriched.

In 1986, please be sure to take the chlorophyll sample from the surface to a depth equal to twice the Secchi disc reading.

Figure 1: The relationship between Secchi disc and chlorophyll a for Little Straggle Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means.

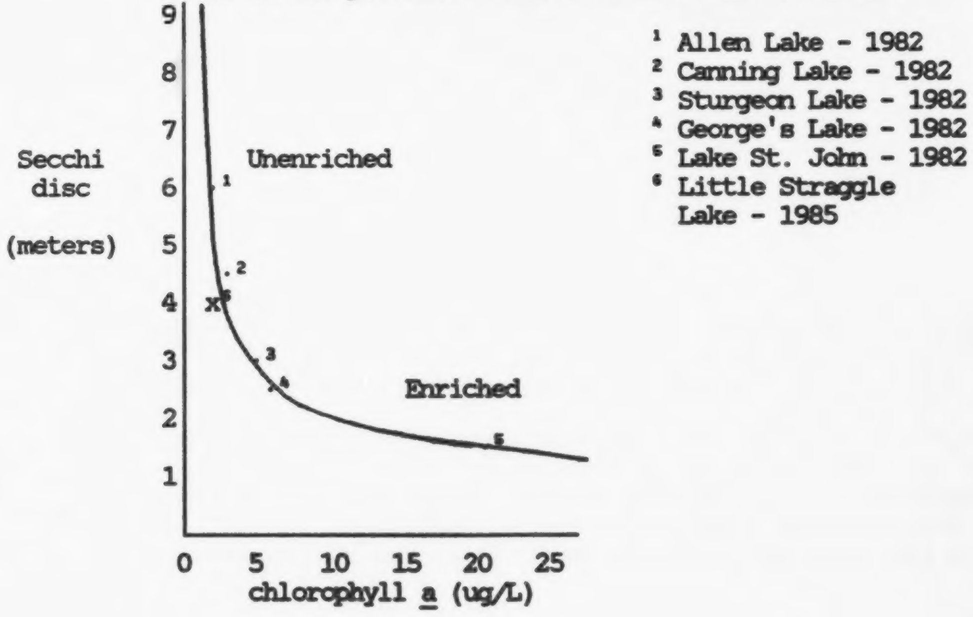
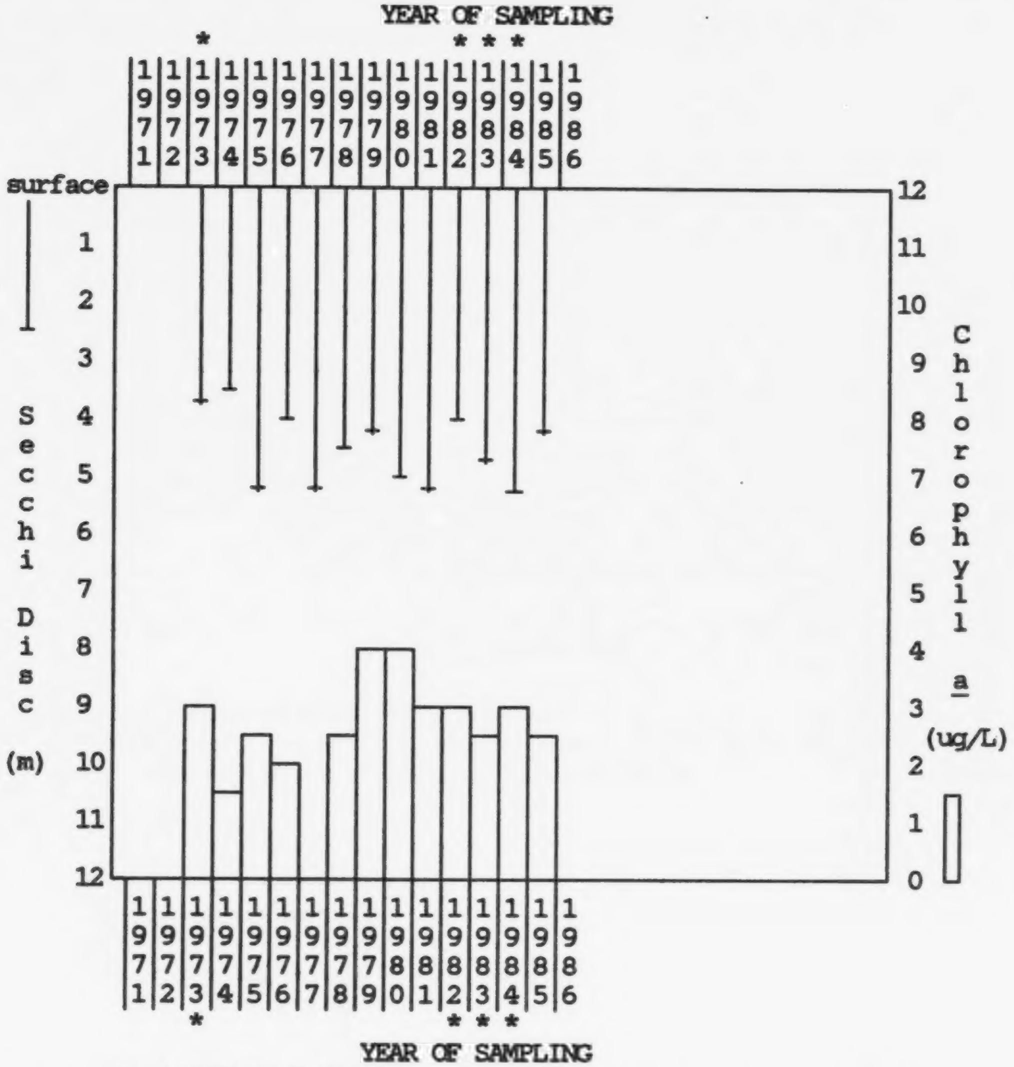


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Little Straggle Lake from 1973 to 1985. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* based on 4 results

An excellent historical record of water quality has been established for Little Straggle Lake with 13 years of data.

These results indicate that there have been no changes in water quality since 1973.

The degree of water clarity has been moderately high for most of the period of record, fluctuating from year to year.

The densities of suspended algae have ranged from low to moderately high, indicative of moderately enriched conditions.

We hope that your participation in this program continues in 1986.

Long Lake

Dudley Township

County of Haliburton

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Long Lake in 1985

Station	West	
Date	S.D.	Chl.a
Aug 5	5.0	1.9
Aug 18	5.0	6.4
Sept 1	5.0	4.4
	------	-----

Insufficient sampling was done on Long Lake in 1985 to obtain any meaningful results. From the 3 results available, the degree of water transparency was high and the chlorophyll a concentrations were variable indicating that low to high densities of suspended algae were present at different times.

If sampling is done in 1986, we recommend that sampling be done on at least six occasions to obtain reliable results.

Figure 1: The relationship between Secchi disc and chlorophyll a for Long Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means.

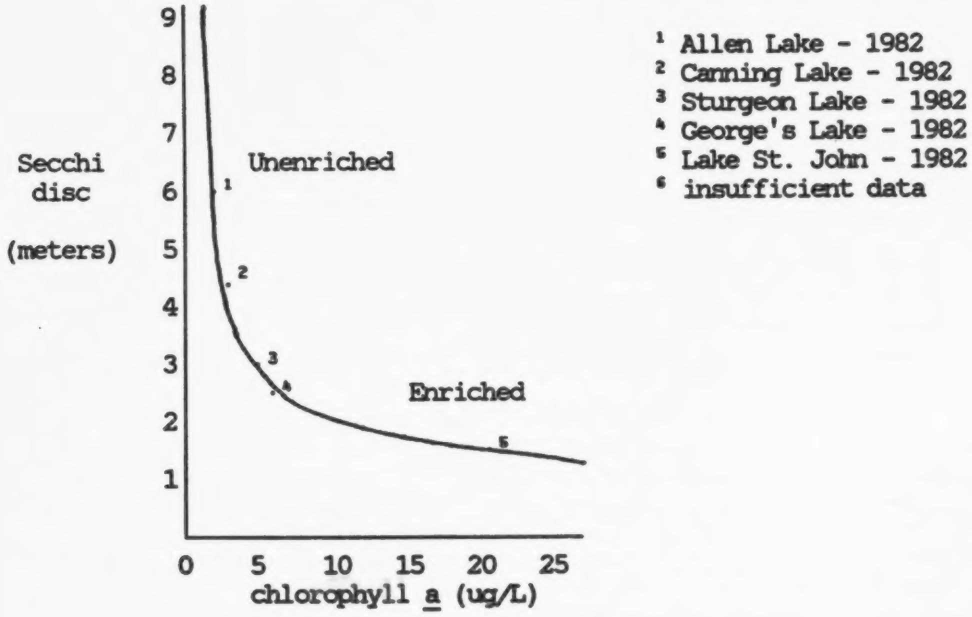
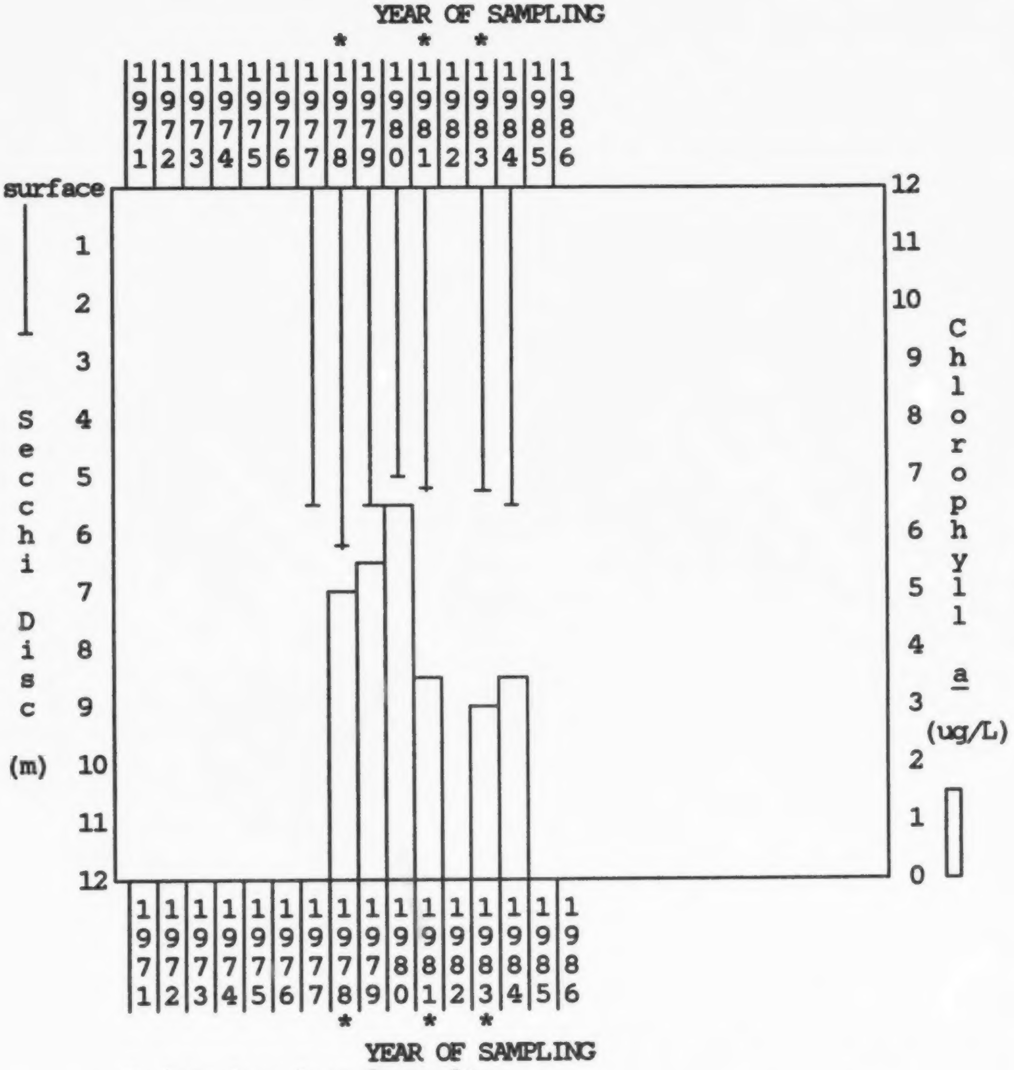


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Long Lake in Dudley Township from 1977 to 1983. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* based on 4 or 5 results

The 7 years of available data for Long Lake in Dudley Township indicate that the degree of water clarity has been consistently high in spite of moderate to high densities of suspended algae.

This probably indicates that the suspended algae is concentrated at a depth below the Secchi disc depths.

In recent years, the densities of suspended algae have been lower than levels observed from 1978 to 1980.

Insufficient sampling was done in 1986 to graph the results. We hope that sampling continues in 1986 with increased sampling frequency.

Long Lake

Harcourt Park

County of Haliburton

Table 1: Secchi disc (m) and chlorophyll a (ug/L) data collected from Long Lake in 1985.

Station	Main	
Date	S.D.	Chl.a
May 20	3.25	2.8
July 28	3.0	1.9
Aug 11	3.75	2.2
Sept 2	4.25	2.2
Sept 29	5.75	1.3
	------	-----
	4.0	2.1

In 1985, Long Lake was sampled on 5 occasions from May 20 to Sept 29. The results of this sampling indicated that the lake had a moderately high degree of water clarity with an average Secchi disc reading of 4.0 m. The densities of suspended algae were moderately low with an average Secchi disc reading of 2.1 ug/L. Long Lake would be considered moderately enriched based on the 1985 data.

FIGURE 1: The relationship between Secchi disc and chlorophyll a for Long Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means.

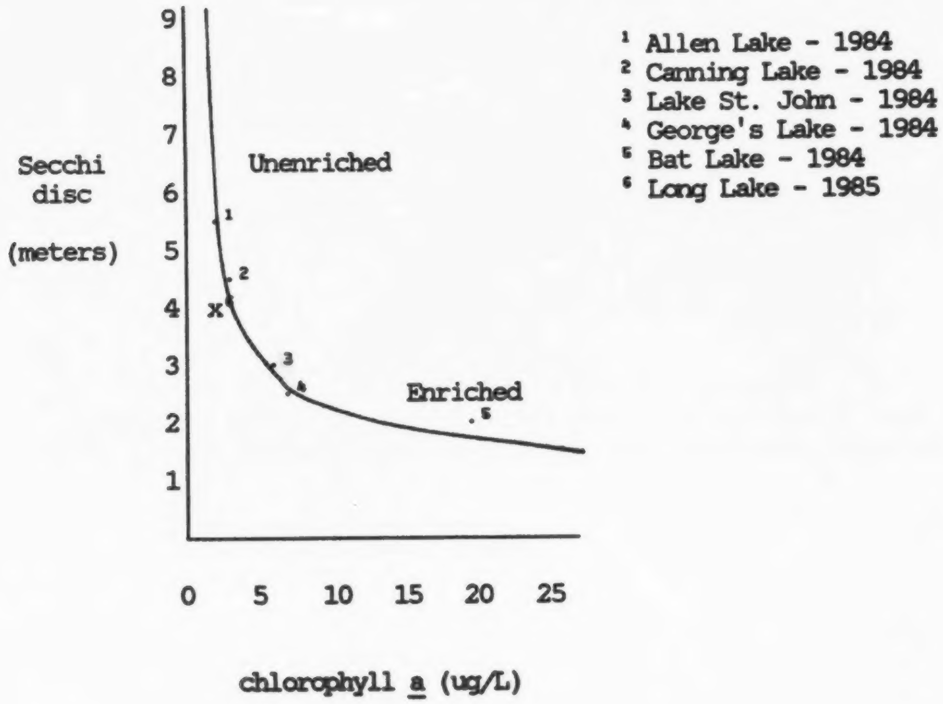
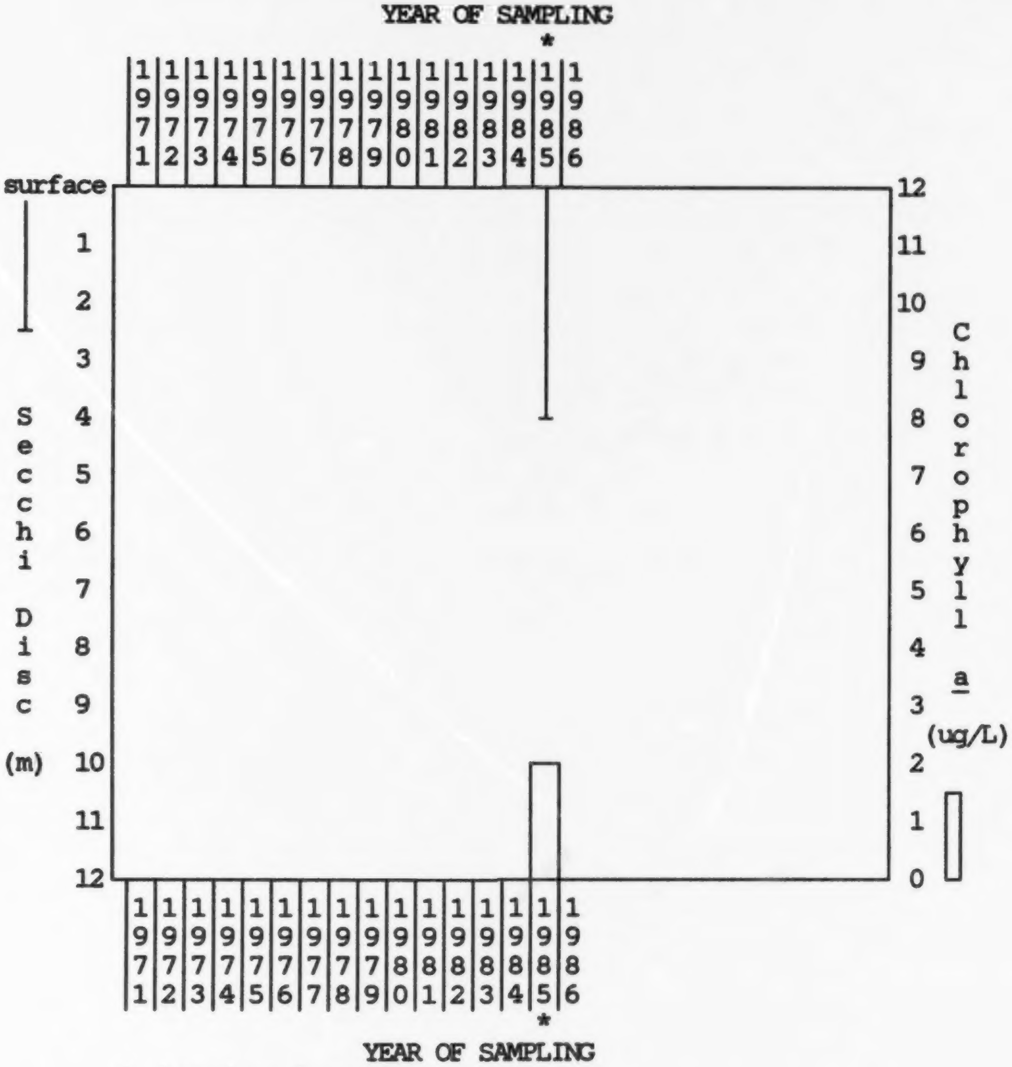


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Long Lake in Harcourt Park in 1985. A minimum of 4 results was required for graphing.



* based on 5 results

We hope that sampling continues in 1986 in order to establish a continuous record of water quality for Long Lake in Harcourt Park.

Loon Lake

Dysart Township

County of Haliburton

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Loon Lake in 1985

Station	Date	S.D.	Chl.a
Deep Island	June 23	N G	1.7
South Bay	June 23	N G	1.3
North Shore East	July 28	N G	2.0
North Shore West	July 28	N G	3.1
Barrets Bay	Sept 7	N G	1.2
Holmes Bay	Sept 7	N G	1.2
Braces & Albert Bay	Sept 8	N G	1.2
Archer Island & Creek	Sept 8	N G	1.4
N G - not given		- -	1.6

In 1985, sampling was done at many different stations on Loon Lake and Secchi disc readings were not recorded on the sample submission sheets so no meaningful results were obtained in 1985.

The chlorophyll a results obtained in 1985 indicated that the densities of suspended algae were low.

We recommend that sampling in 1986 be done at 1 station and Secchi disc readings and chlorophyll sample depths be recorded on the sample submission sheets.

Figure 1: The relationship between Secchi disc and chlorophyll a for a number of recreational lakes in the province. All data. are seasonal means.

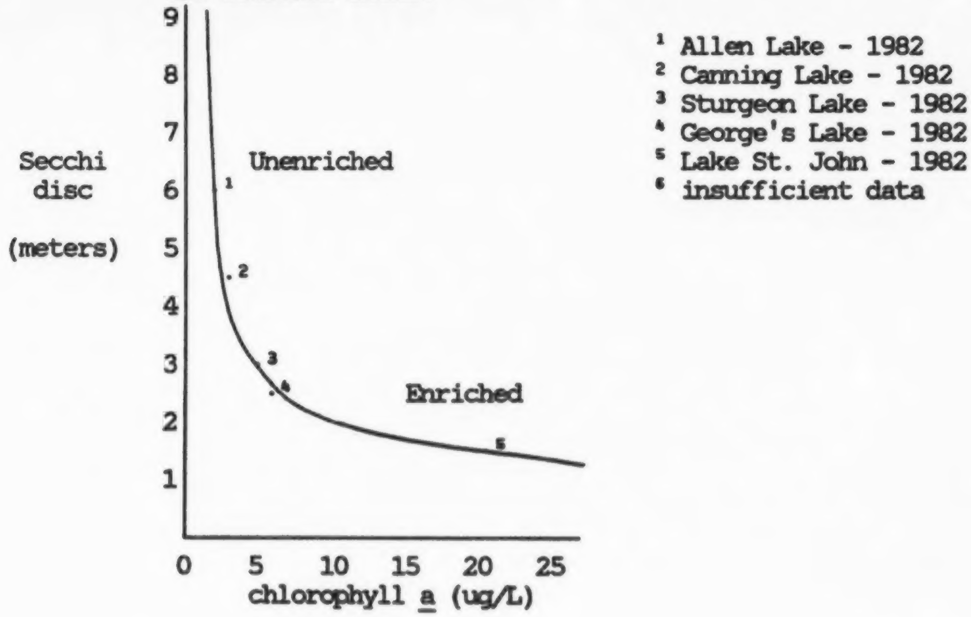
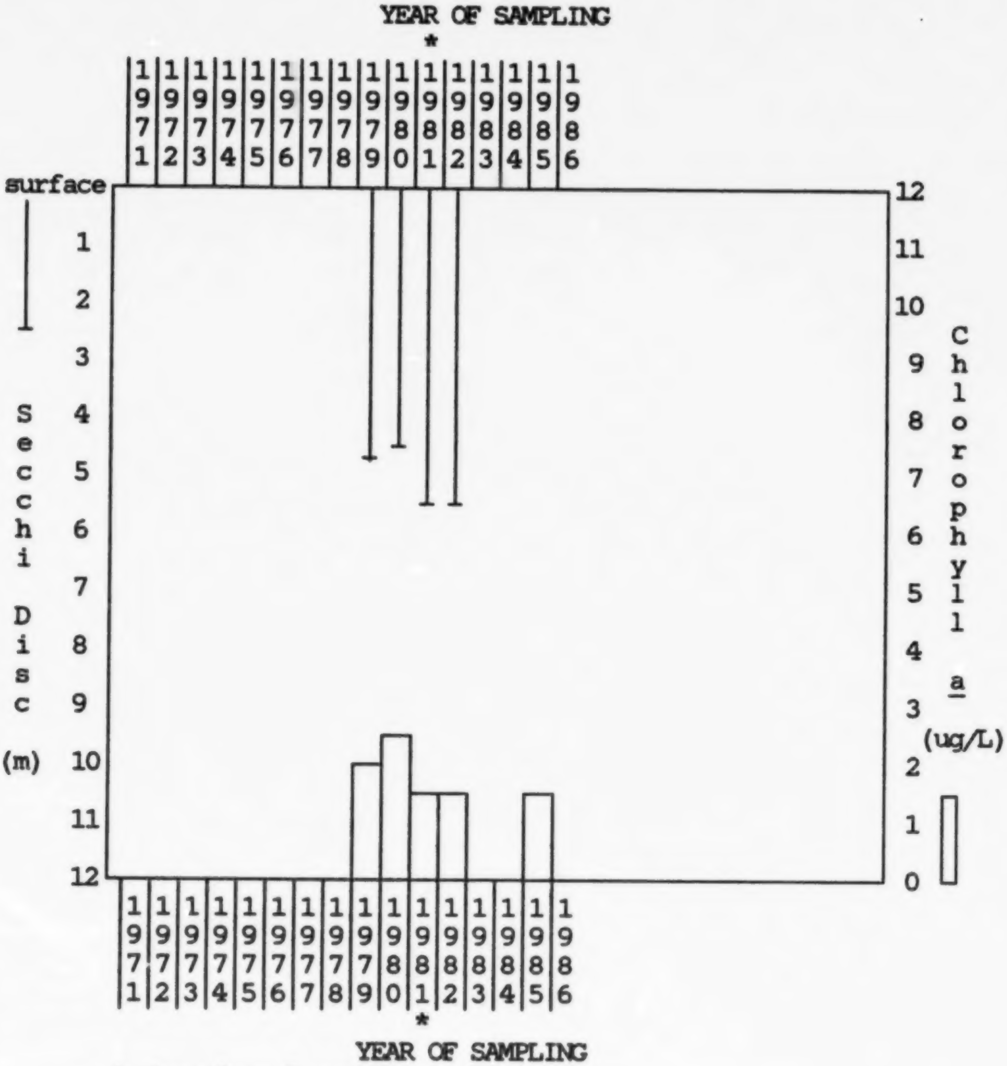


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Loon Lake in Haliburton from 1979 to 1982. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* based on 5 results

We now have 5 years of data available for Loon Lake in Dysart.

The degree of water clarity in 1981 and 1982 was slightly higher than the clarity in 1978 and 1979. No readings were provided in 1985 so we are unable to comment on recent clarity.

The densities of suspended algae were moderately low in 1979 and 1980 and decreased to low densities in recent years.

In general, water quality in Loon Lake continues to be good with no major changes for the period of record.

We hope that you continue with this program in 1986.

Loon Lake

Muskoka Ward
Town of Gravenhurst

District Municipality of
Muskoka

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Loon Lake in 1985

Station	Main	
Date	S.D.	Chl.a
June 8	3.0	3.3
July 1	3.0	3.9
July 28	3.5	3.6
Aug 5	2.5	2.4
Sept 2	3.5	4.8
	-----	-----
	3.1	3.6

In 1985, Loon Lake was sampled on 5 occasions from June 8 to Sept. 2. Secchi disc readings indicated a moderately low degree of water clarity averaging 3.1 m. Chlorophyll a concentrations were moderately high averaging 3.6 ug/L. Chlorophyll samples were not taken through a depth of twice the Secchi disc reading due to shallowness of the lake.

Based on these results, Loon Lake would be considered moderately enriched.

Figure 1: The relationship between Secchi disc and chlorophyll a for Loon Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means.

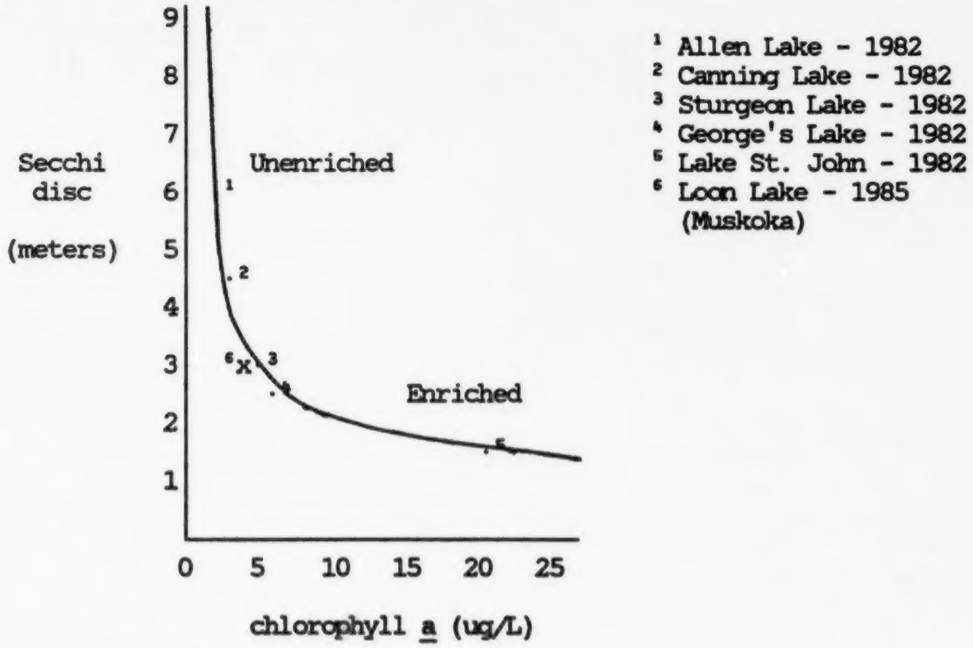
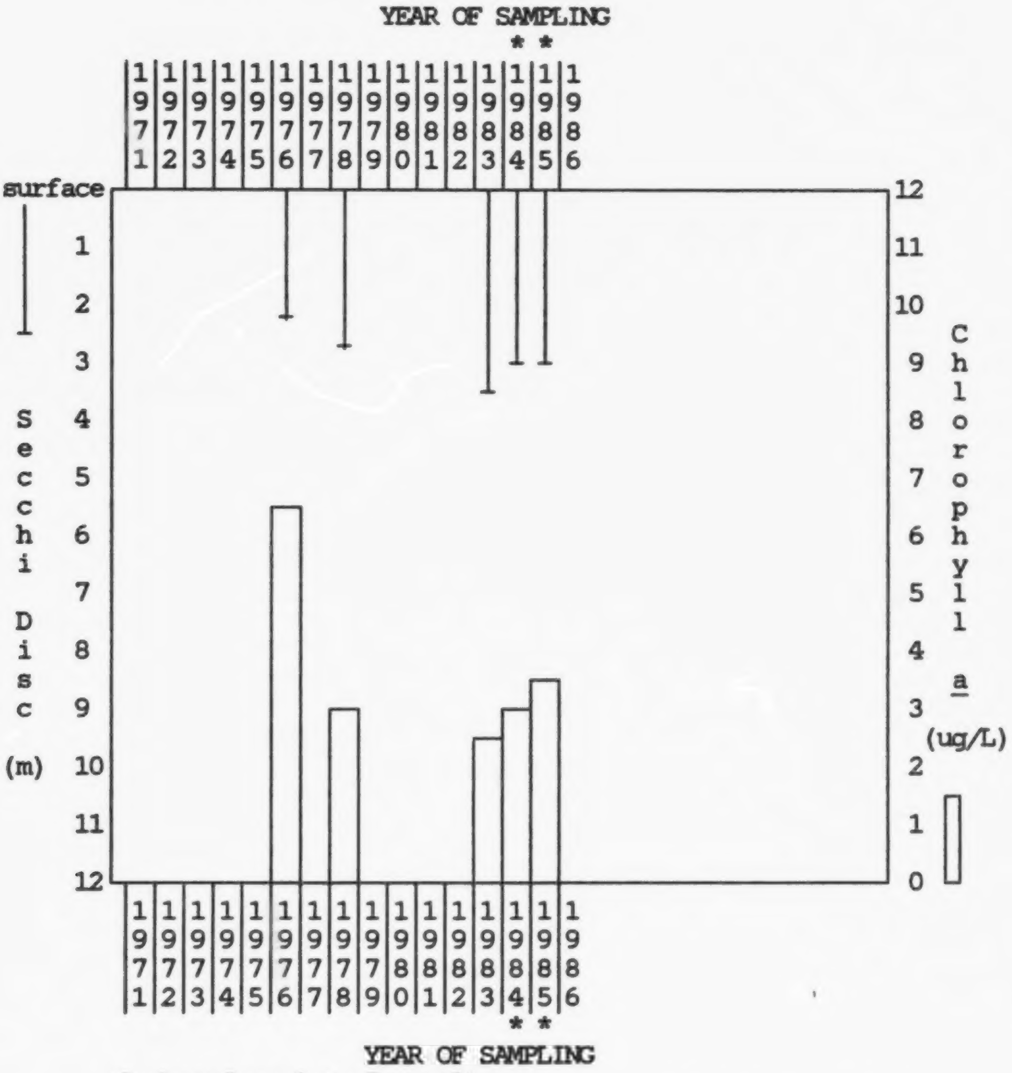


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Loon Lake in Muskoka from 1976 to 1985. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* based on 4 or 5 results

The 5 years of available information for Loon Lake in Gravenhurst indicates that the degree of water clarity in recent years has been slightly higher than in 1976 and 1978.

The densities of suspended algae were highest in 1976 and have been moderate for the remainder of the period of record.

These results indicate that the water quality in Loon Lake has been better in recent years but there has been no major change.

We hope that sampling continues in 1986.

Looncall Lake

Burleigh Township

County of Peterborough

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Looncall Lake in 1985

Station	23 East		48 West	
Date	S.D.	Chl.a	S.D.	Chl.a
June 16	3.5	4.6	3.5	4.2
July 1	3.5	1.9	4.0	1.6
July 28	4.0	2.2	4.0	2.0
Aug 5	3.0	1.4	3.0	2.1
Aug 18	3.5	U R	3.0	U R
Aug 22	3.5	4.9	4.0	3.2
Sept 2	4.0	2.5	4.0	2.8
Sept 6	3.5	4.6	3.5	3.5
Sept 15	4.0*	2.4	4.5*	1.1
	3.6	3.1	3.7	2.6

U R - unreliable sample result; unable to confirm analysis

* - Secchi disc reading not given; assumed to be 1/2 chlorophyll sample depth

Once again, an excellent sampling program was done on Looncall Lake with sampling on 9 occasions. Water quality at both stations was similar with an average Secchi disc reading of 3.6 m at Station 23 East and 3.7 m at Station 48 West, indicating moderate water clarity. Chlorophyll a concentrations were variable at both stations with an average of 3.1 ug/L at the East station and 2.6 ug/L at the West station indicating moderate densities of suspended algae. Based on the 1985 results Looncall Lake would be considered moderately enriched.

Figure 1: The relationship between Secchi disc and chlorophyll a for Looncall Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means.

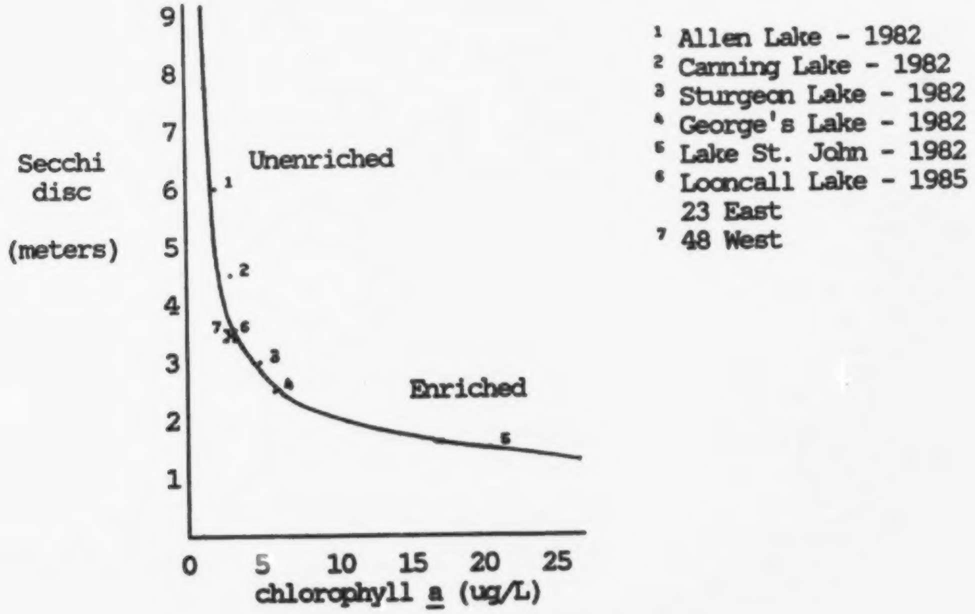
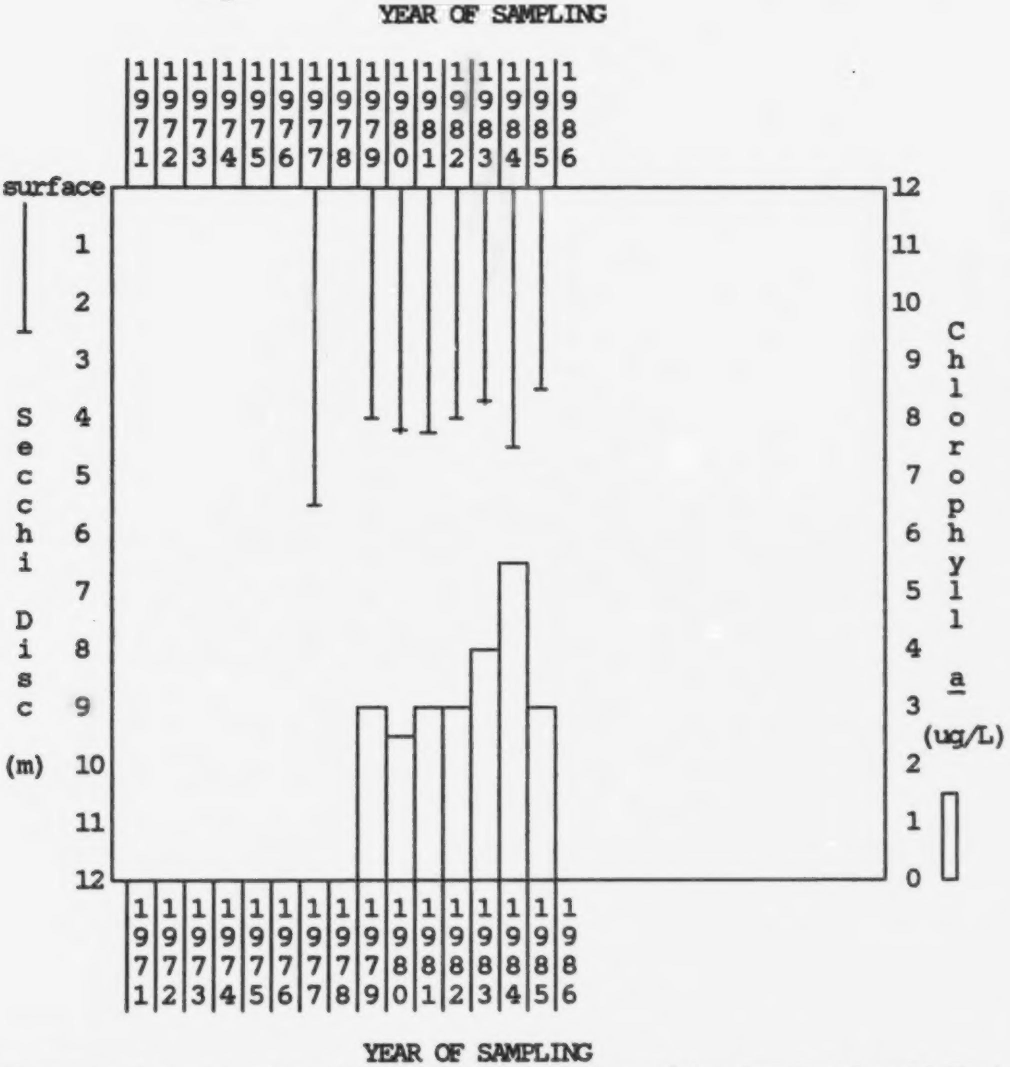
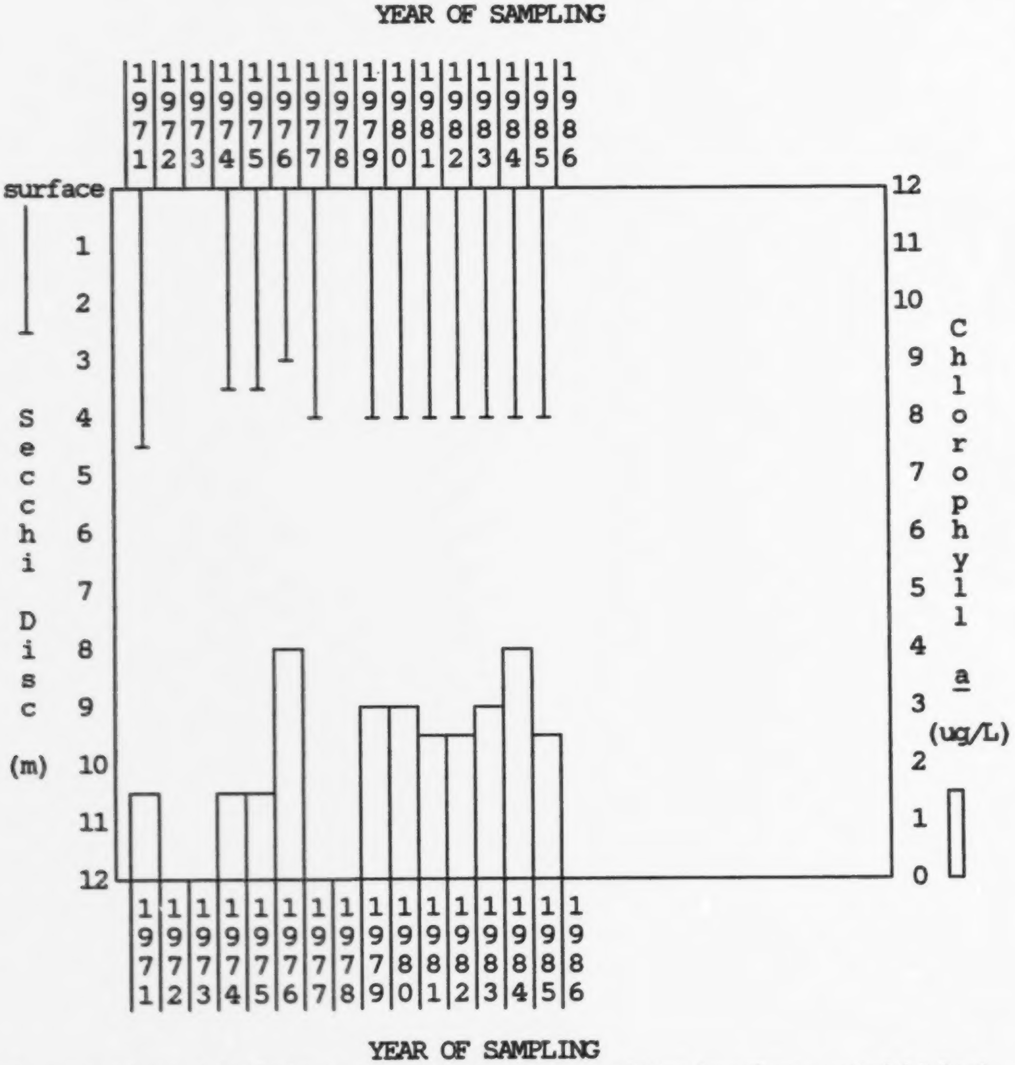


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Looncall Lake (Station 23 East) from 1977 to 1985. Seasonal mean data (more than 6 sampling dates) only.



There is 8 years of reliable seasonal average data for Station 23 East on Looncall Lake.
The degree of water clarity has been moderate for most of the period of record except for 1977 when clarity was high.
Densities of suspended algae were moderately low except in 1983 and 1984 when densities were high. There has been no overall change in water quality at this location.
We hope you continue your excellent work in 1986.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Looncall Lake (Station 48 West) from 1971 to 1985. Seasonal mean data (more than 6 sampling dates) only.



YEAR OF SAMPLING

An excellent historical record of water quality has been established for Station 48 West on Looncall lake with 12 years of reliable data. The average Secchi disc readings have consistently ranged from 3 to 4.5 m indicating a moderate degree of water clarity.

Densities of suspended algae were low in 1971, 1974 and 1975 and since that time, densities of algae have been moderate.

The record of water quality for this location indicates moderately enriched conditions.

We hope you continue your excellent program at this location in 1986.

Medora Lake

Medora Ward
Township of Muskoka Lakes

District Municipality of Muskoka

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Medora Lake in 1985

	Station 1	
	S.D.	Chl.a
June 9 *	4.0	2.7
June 23	4.0	3.8
July 1	4.0	1.9
July 28	4.5	10.2
Aug 7	4.5	8.6
Aug 11	4.5	7.7
Sept 1	4.5	8.5
Sept 29	4.5	2.5
	-----	-----
	4.3	5.7
	-----	-----

* - no sampling date given

In 1985, an excellent sampling program was done on Medora Lake with 8 sampling dates. Secchi disc readings were consistent indicating a moderately high degree of water clarity. Chlorophyll a concentrations were variable, ranging from 1.9 ug/L at the start of July to 10.2 ug/L by the end of July. The average concentration of 5.7 ug/L indicated that high densities of suspended algae were present.
Based on the information available, Medora Lake would be considered moderately enriched with highly variable densities of suspended algae.

In 1986, please be sure to enter the sampling date on the submission forms for all samples.

Figure 1: The relationship between Secchi disc and chlorophyll a for Medora Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means.

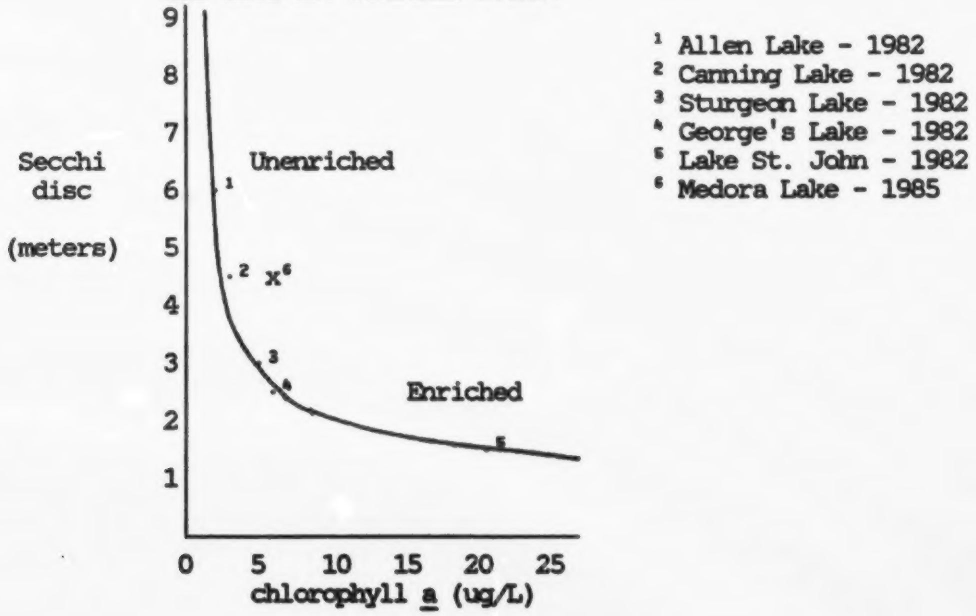
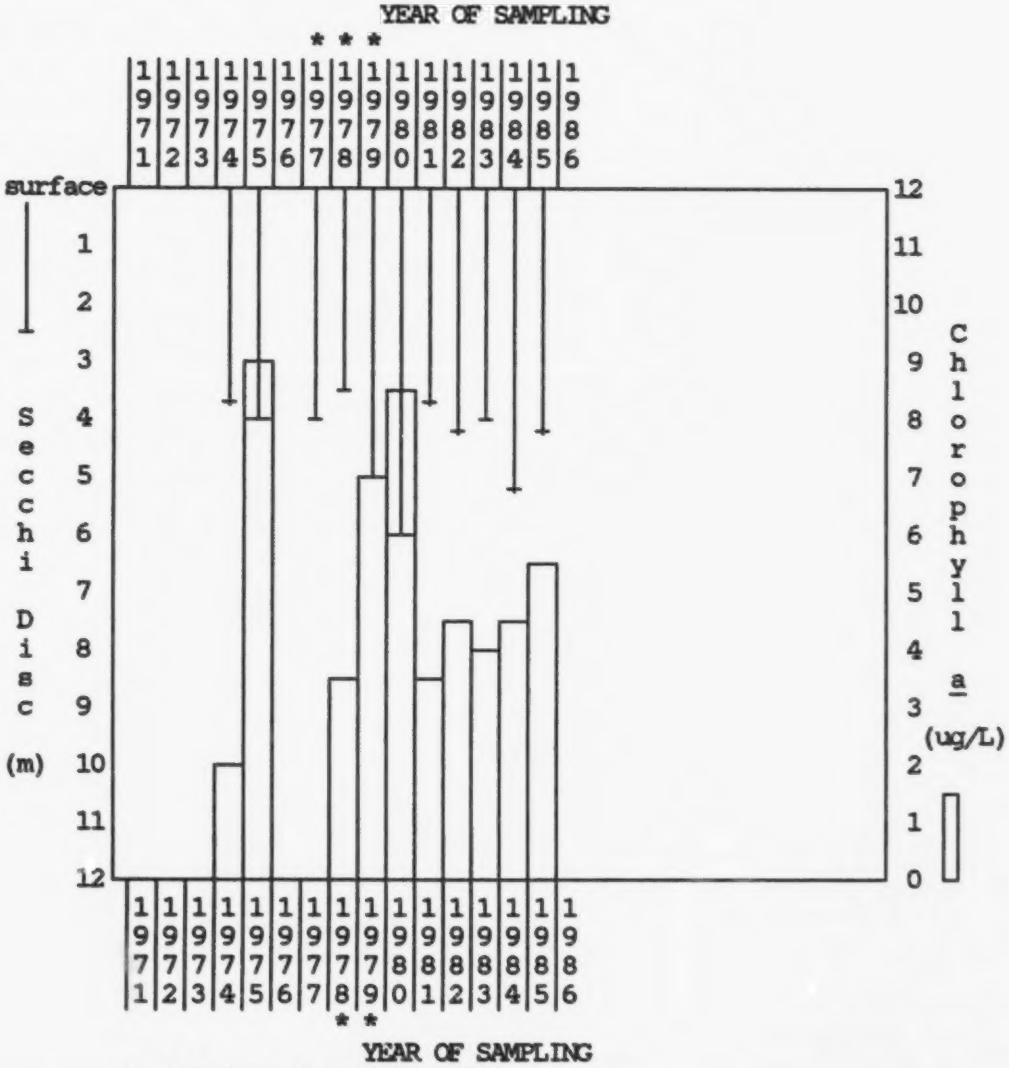


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Medora Lake from 1974 to 1985. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* based on 4 or 5 results

We now have 11 years of data for Medora Lake providing an excellent historical record of water quality.

The degree of water clarity has been moderate for most of the period of record, however, in 1979, 1980 and 1984 the clarity was high.

Densities of suspended algae have fluctuated from moderately low in 1974 to high denisties in 1975, 1979 and 1985.

The wide ranges in chlorophyll a concentration often occur in moderately enriched lake conditions. There has been no overall change in water quality in this lake since 1974.

We hope you continue the excellent work on Medora Lake in 1986.

Minden Lake

Hindon & Minden Townships

County of Haliburton

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Minden Lake in 1985

Station	Bingham Bay	
Date	S.D.	Chl.a
June 23	5.4	2.0
July 1	4.7	1.6
Aug 5	5.4	1.5
Aug 11	5.5	1.3
Aug 18 *	4.5	2.4
Sept 2	5.4	2.0
	-----	-----
	5.1	1.8

* sampling location given as Schemps Rock

Minden Lake was sampled on 6 occasions from June 23 to Sept. 2 in 1985. Secchi disc readings were generally high ranging from 4.5 to 5.5 m and averaging 5.1 m, indicating a high degree of water clarity. Chlorophyll a concentrations were low ranging from 1.3 to 2.4 ug/L and averaging 1.8 ug/L, indicating low densities of suspended algae.

The water quality of Bingham Bay of Minden Lake was indicative of unenriched conditions with clear water and low densities of algae.

Figure 1: The relationship between Secchi disc and chlorophyll a for Minden Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means.

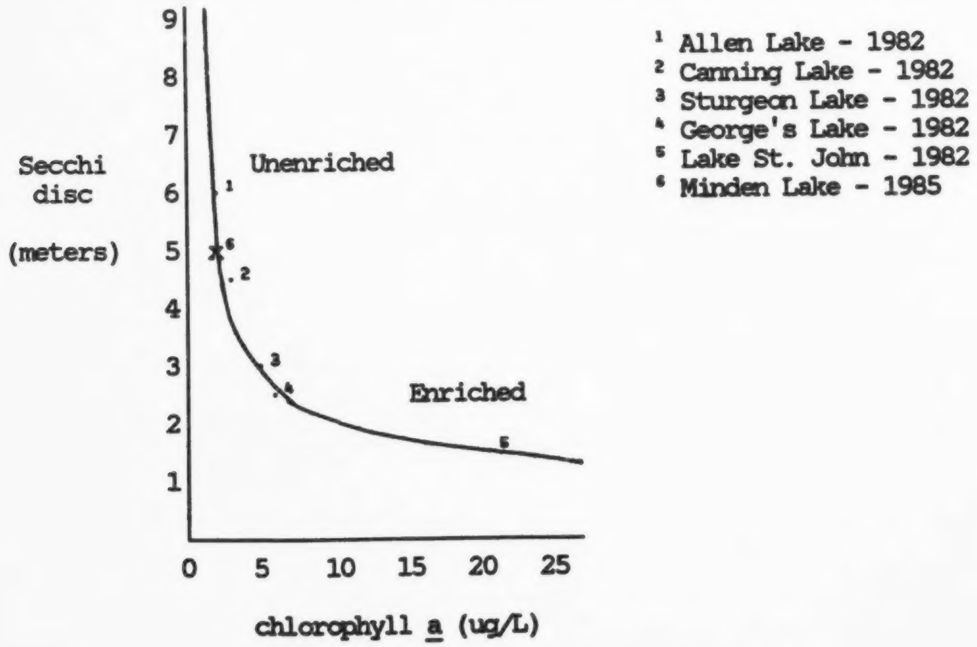
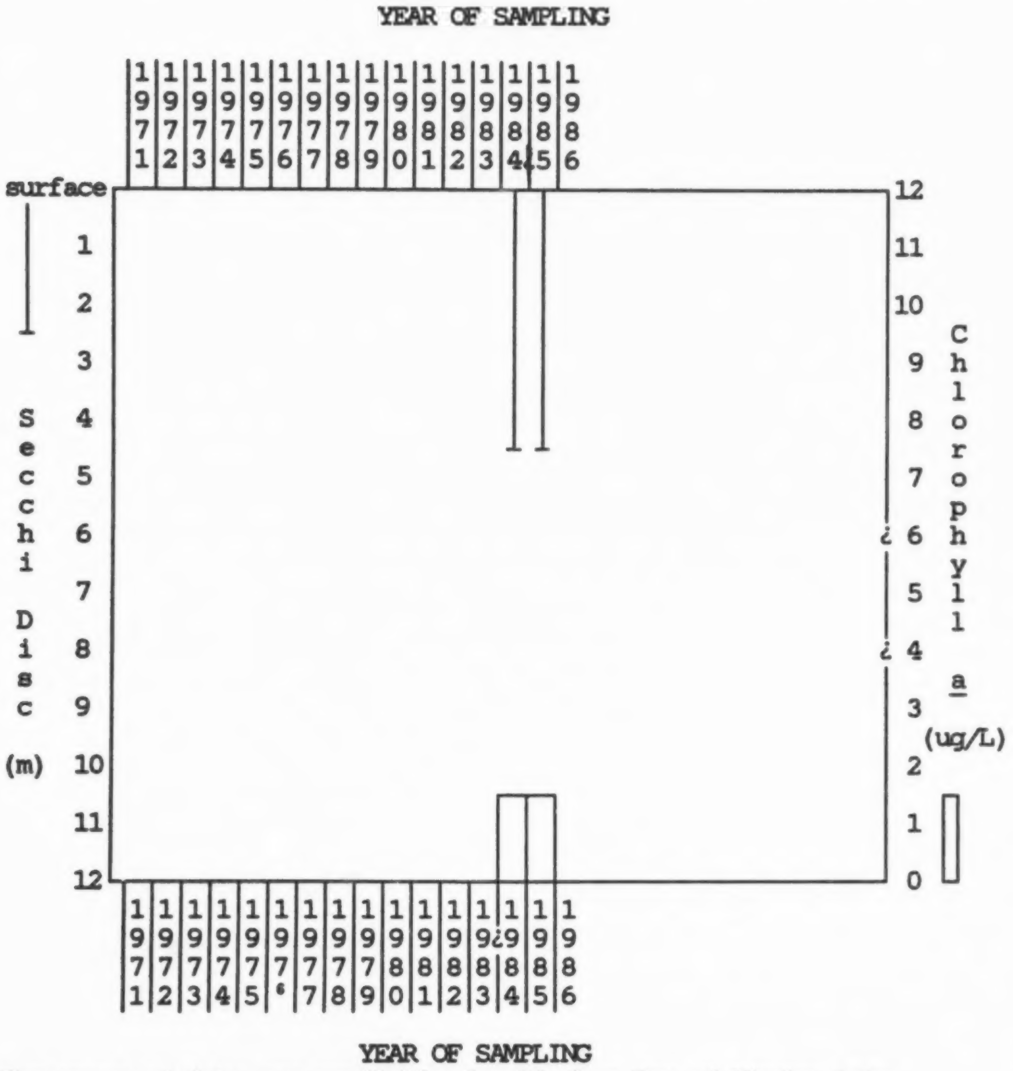


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Minden Lake (Bingham Bay) from 1984 to 1985. Seasonal mean data (more than 6 sampling dates) only.



Two years of data are available for Bingham Bay of Minden Lake.
The degree of water clarity has been moderately high and the densities of suspended algae have been low for the last 2 years.
Please continue the good work in 1986.

Miskwabi Lake

Dudley Township

County of Haliburton

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Miskwabi Lake in 1985

Station	East Stn.13		West Stn.6	
Date	S.D.	Chl.a	S.D.	Chl.a
July 1	6.75	1.9	- -	- -
July 21	6.75	0.9	- -	- -
Aug 5	6.25*	1.2*	- -	- -
Aug 11	6.5 *	1.3*	- -	- -
Aug 18	6.5	1.6	6.5	1.4
Sept 2	7.5 *	1.7*	6.5	1.6
Sept 8	- -	- -	6.5	1.6
Sept 22	- -	- -	6.5	1.3
Oct 6	- -	- -	6.5	2.5
	-----	-----	-----	-----
	6.7	1.4	6.5	1.7

* - no sampling date given

A good sampling program was done on Miskwabi Lake in 1985.

Water quality was similar at both stations with Secchi disc readings averaging 6.7 m at the East station and 6.5 m at the West station, indicating a high degree of water clarity.

Chlorophyll a concentrations at the East station averaged 1.4 ug/L and at the West station averaged 1.7 ug/L, indicating that low densities of suspended algae were present.

Water quality of Miskwabi Lake in 1985 was excellent, typical of unenriched conditions. In 1986, please be sure to enter sampling dates for all samples on submission forms.

Figure 1: The relationship between Secchi disc and chlorophyll a for Miskwabi Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means.

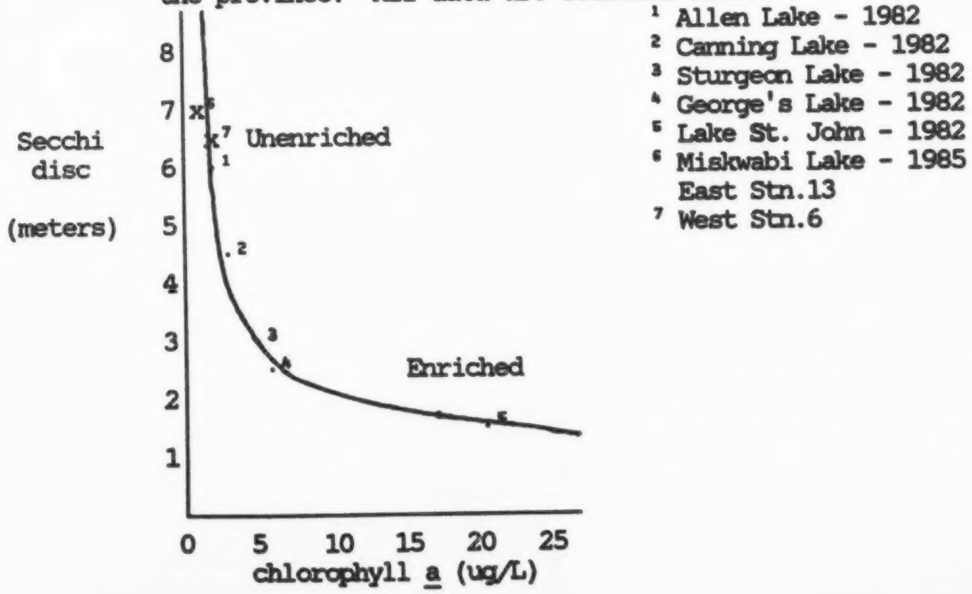
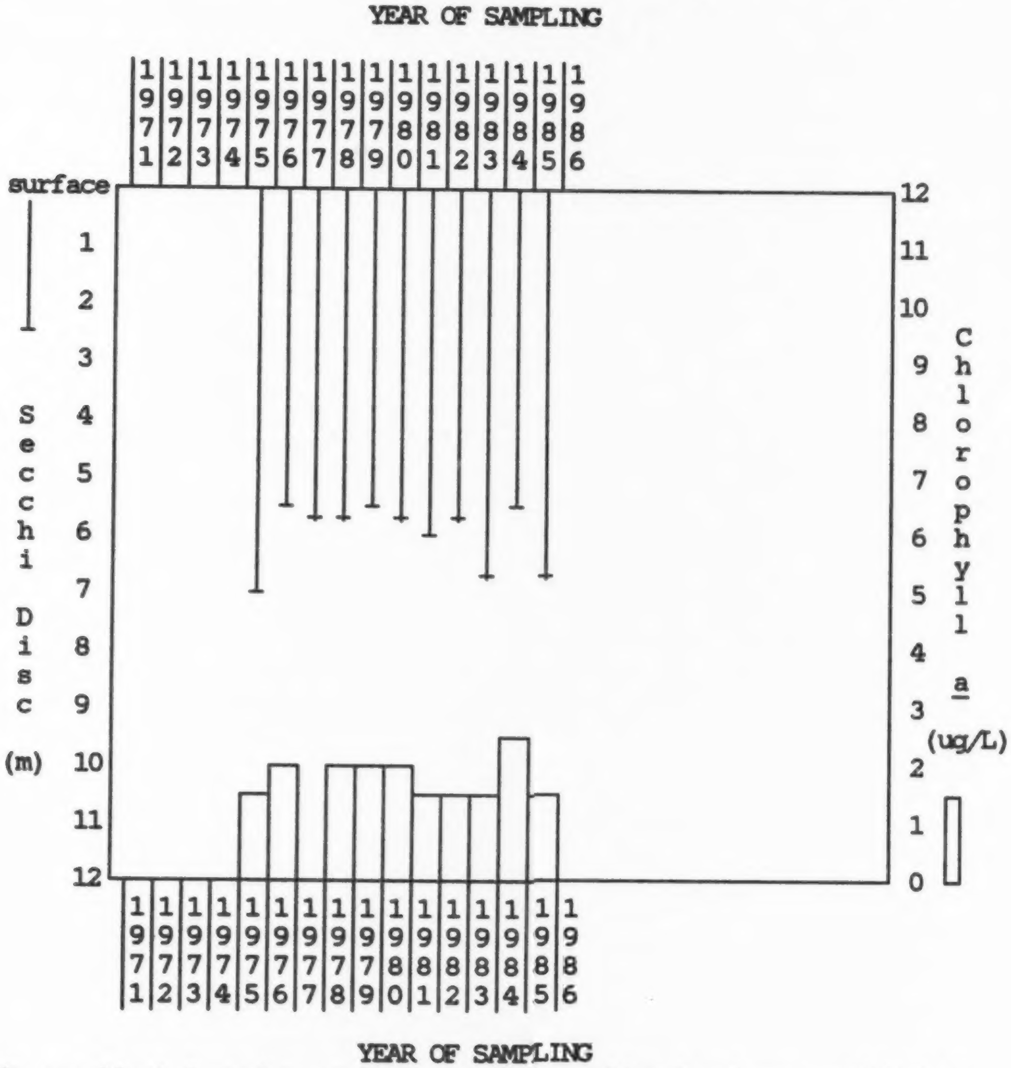
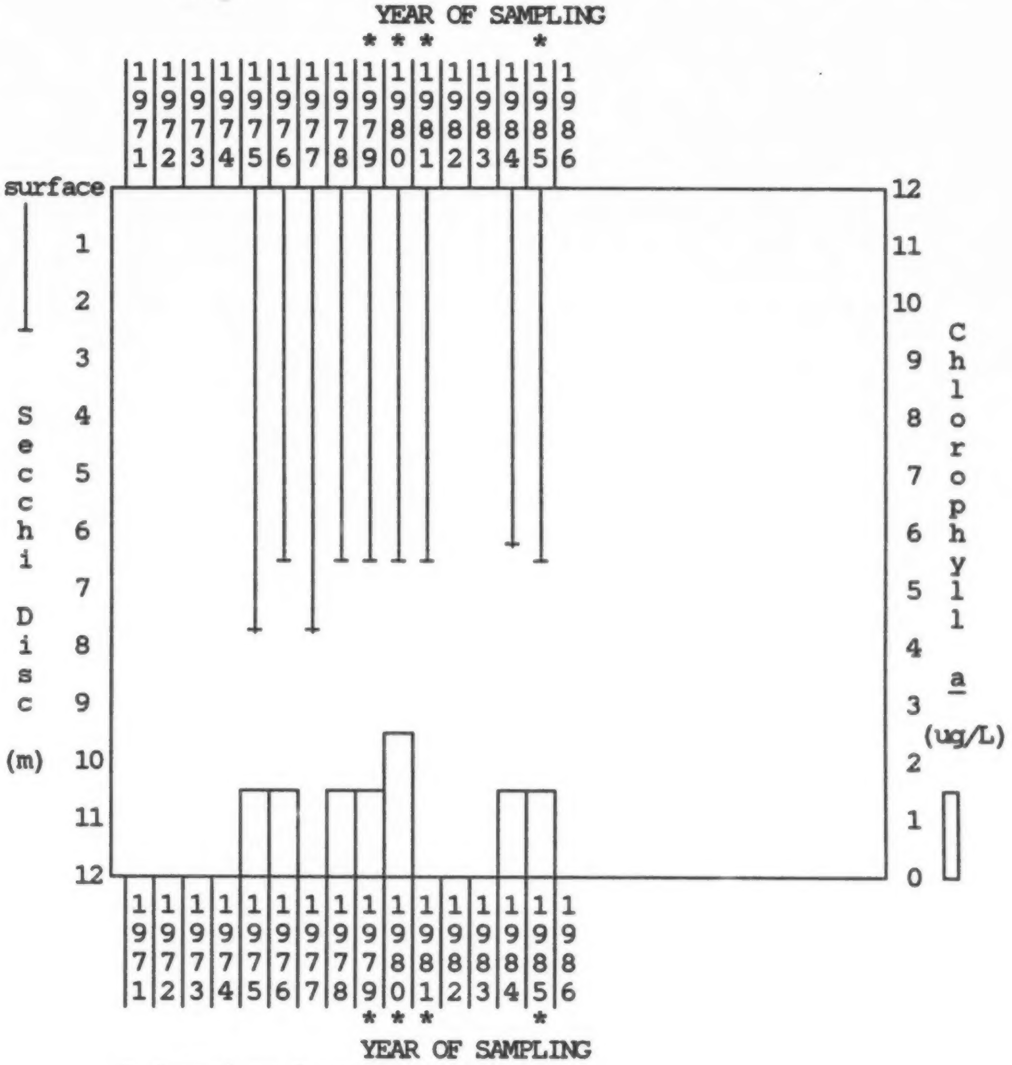


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Miskwabi Lake (Station 13 East) from 1975 to 1985. Seasonal mean data (more than 6 sampling dates) only. A minimum of 4 results was required for graphing.



An excellent long-term record of water quality has been established for Miskwabi Lake Station 13 with 11 years of data.
The degree of water clarity has been high and the densities of suspended algae have been low for most of the period of record.
No overall changes in water quality have occurred at this location.
A detailed water quality survey of Miskwabi Lake will be done in 1986 by the Ministry of the Environment.
We hope Self Help continues at this location in 1986.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Miskwabi Lake (Station 6 West) from 1975 to 1985. Seasonal mean data (more than 6 sampling dates) only.



* based on 4 or 5 results

We now have a good historical record of water quality for Miskwabi Lake at Station 6 with 9 years of data.

The degree of water clarity has been consistently high and the densities of suspended algae have been low for the period of record.

There have been no overall changes in water quality in Miskwabi Lake at this location. A detailed water quality survey of this lake will be done by the Ministry of the Environment in 1986.

We hope the Self Help Program continues also to maintain the excellent record of water quality.

Mississauga Lake

Harvey & Cavendish Townships

County of Peterborough

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Mississauga Lake in 1985

Station	North End		South End	
Date	S.D.	Chl.a	S.D.	Chl.a
July 1	4.7	2.6	4.6	2.3
July 28	4.8	1.5	4.8	1.6
Aug 18	5.0	2.0	5.0	2.4
Sept 1	5.0	2.0	4.9	2.0
Sept 15	6.0	2.1	6.2	1.5
	5.1	2.0	5.1	2.0

In 1985, Mississauga Lake was sampled on 5 occasions from July 1 to Sept 15. Water quality at both stations was similar. Secchi disc readings averaged 5.1 m at both the North End and the South End, indicating a high degree of water clarity. Chlorophyll a concentrations averaged 2.0 ug/L at both stations, indicating low densities of suspended algae. Based on these results, Mississauga Lake would be considered unenriched with very good water quality.

Figure 1: The relationship between Secchi disc and chlorophyll a for Mississauga Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means.

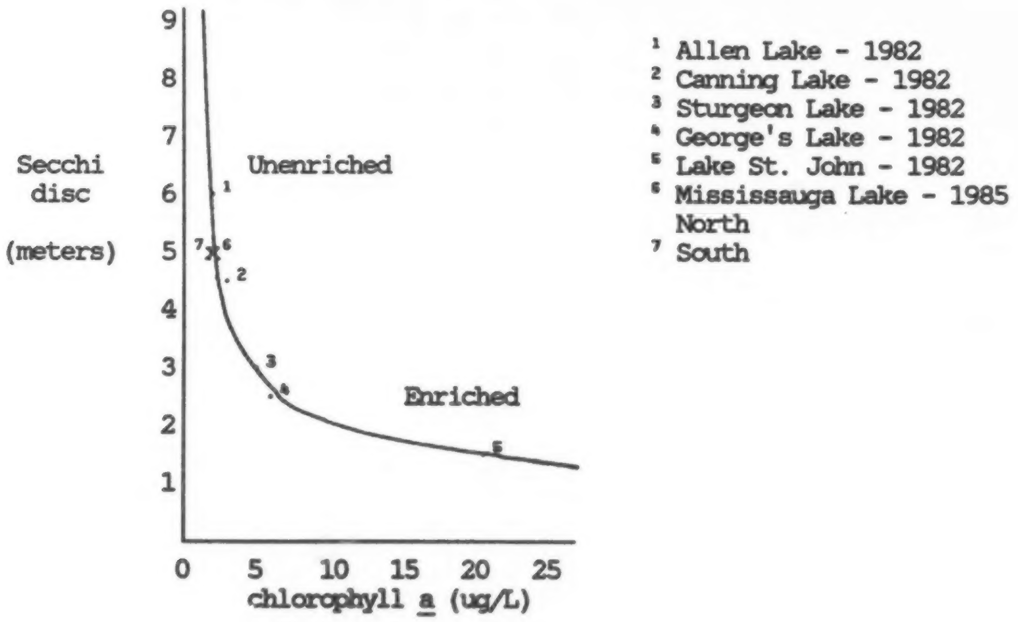
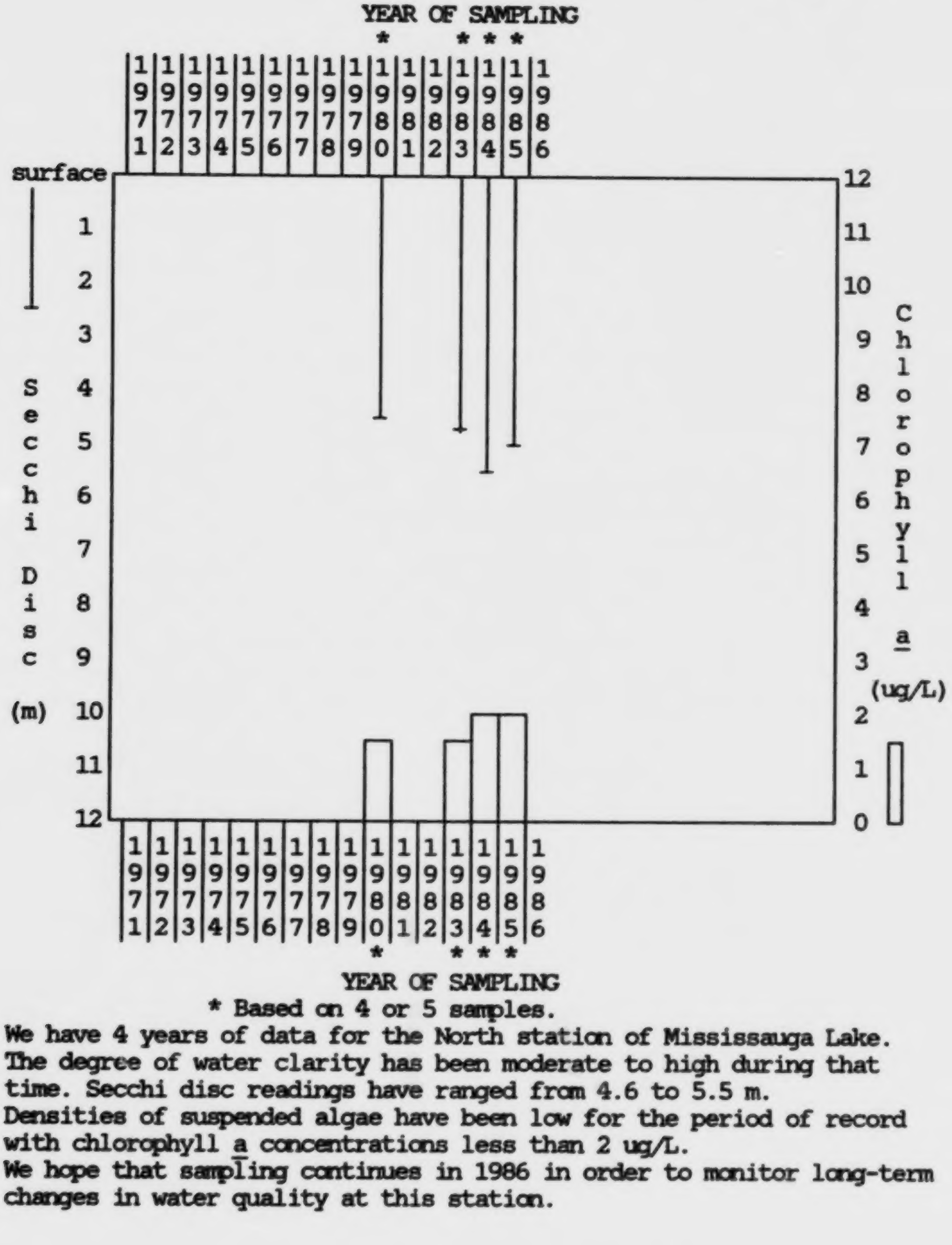


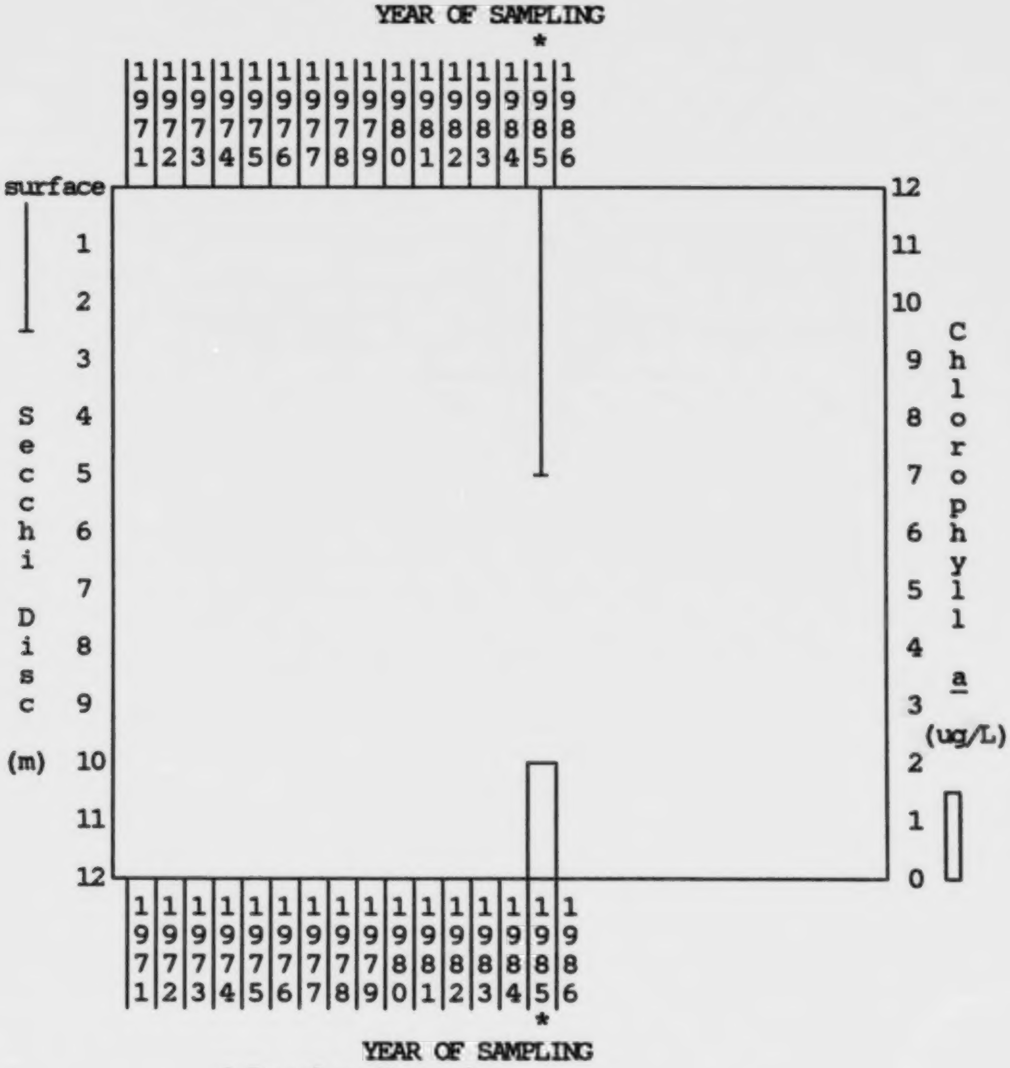
Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Mississauga Lake (North station) from 1980 to to 1985. Seasonal mean data (more than 6 sampling dates) only. A minimum of 4 results was required for graphing.



* Based on 4 or 5 samples.

We have 4 years of data for the North station of Mississauga Lake. The degree of water clarity has been moderate to high during that time. Secchi disc readings have ranged from 4.6 to 5.5 m. Densities of suspended algae have been low for the period of record with chlorophyll a concentrations less than 2 ug/L. We hope that sampling continues in 1986 in order to monitor long-term changes in water quality at this station.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Mississauga Lake (South station) from 1985. Seasonal mean data (more than 6 sampling dates) unless otherwise specified.



* Based on 5 samples.

We now have 1 year of data for the South station of Mississauga Lake. We hope sampling continues in 1986 at this location in order to establish a long-term record of water quality.

Moot Lake

McLean Ward
Township of Lake of Bays

District Municipality of
Muskoka

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Moot Lake in 1985

Station	South End	
Date	S.D.	Chl.a
July 3	2.0	5.3
Aug 5	2.0	5.5
Aug 11	2.25	1.0
Aug 25	2.0	12.4
Sept 15	1.25	7.1
Sept 22	1.25	5.3
Sept 29	1.5	3.0
Oct 14	1.25	2.7
	1.7	5.3

In 1985, an excellent sampling program was done on Moot Lake with 8 sampling dates from July 3 to Oct. 14. Secchi disc readings ranged from 1.25 to 2.3 m and averaged 1.7 m, indicating a low degree of water clarity. Chlorophyll a concentrations ranged from 1.0 to 12.4 ug/L and averaged 5.3 ug/L indicating that high densities of suspended algae were present and an algae bloom occurred in late August. Based on the seasonal averages, Moot Lake would be considered enriched, with low water clarity and high densities of suspended algae.

Figure 1: The relationship between Secchi disc and chlorophyll a for Moot Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means.

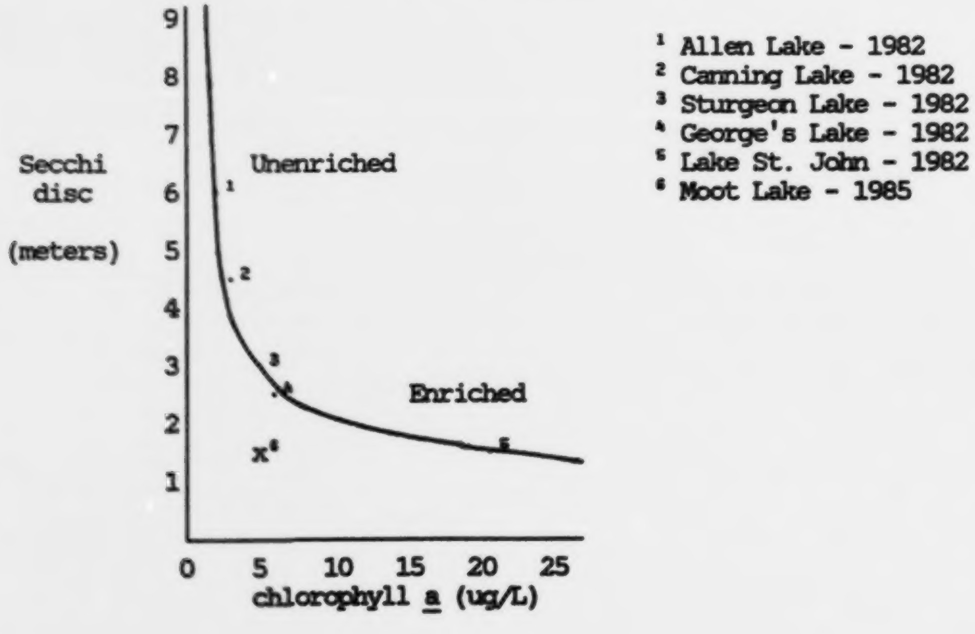
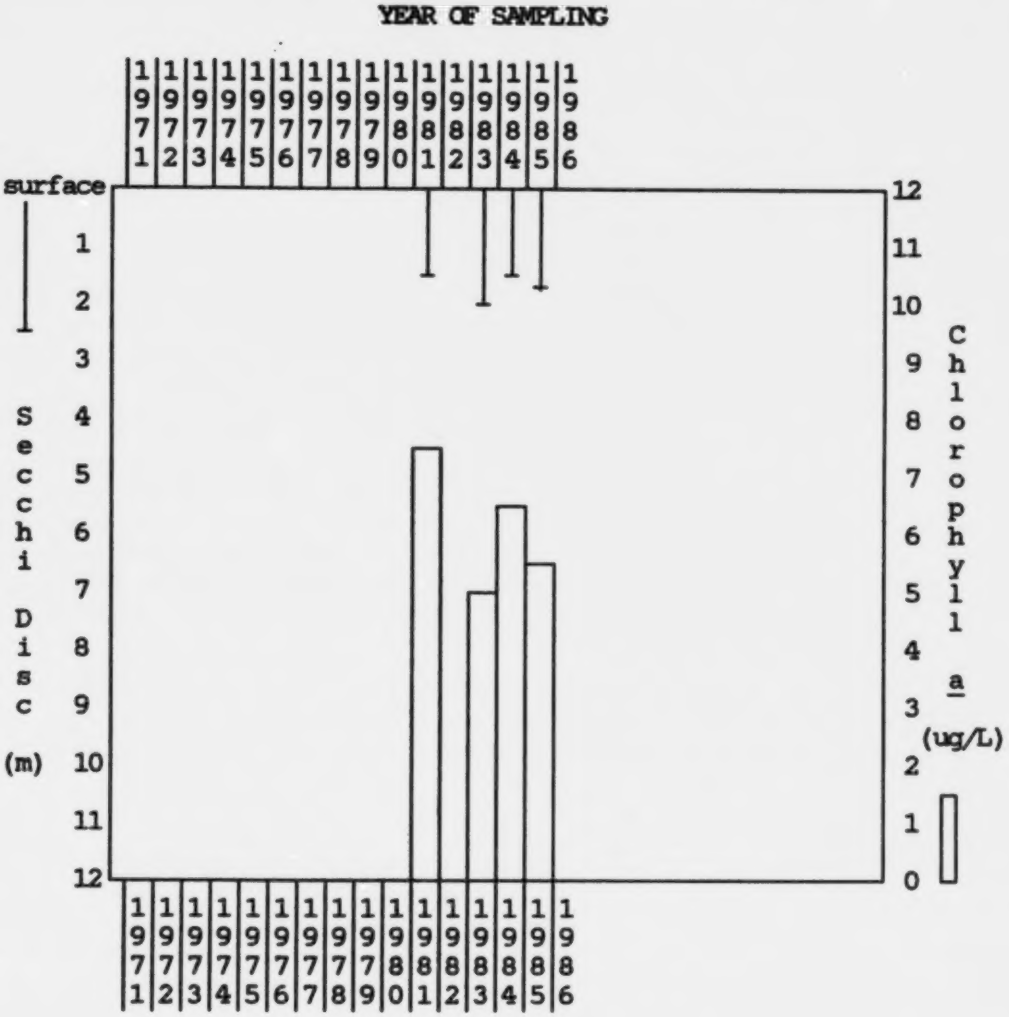


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Moot Lake from 1981 to 1985. Seasonal mean data (more than 6 sampling dates) unless specified. A minimum of 4 results was required for graphing.



YEAR OF SAMPLING

The 4 years of available data for Moot Lake indicate a consistently low degree of water clarity and high densities of suspended algae. We hope you continue your excellent participation in this program next year in order to establish a long-term water quality record for Moot Lake.

Morrison Lake

Wood Ward
Town of Gravenhurst

District Municipality of
Muskoka

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Morrison Lake in 1985

Station	NORTH BAY		SOUTH BAY	
Date	S.D.	Chl.a	S.D.	Chl.a
July 1*	2.5	1.9	3.0	2.3
Sept 2*	2.5	2.4	3.0	2.5
Sept 22*	2.0	2.3	2.5	1.6
	-----	-----	-----	-----

* - sampling date not given
Insufficient sampling was done in 1985 to obtain meaningful data. Based on the 3 available results, the degree of water transparency was low and the densities of suspended algae were also moderately low.
In 1986, please be sure to enter the sampling dates for all samples on the submission forms.

Figure 1: The relationship between Secchi disc and chlorophyll a for a number of recreational lakes in the province.

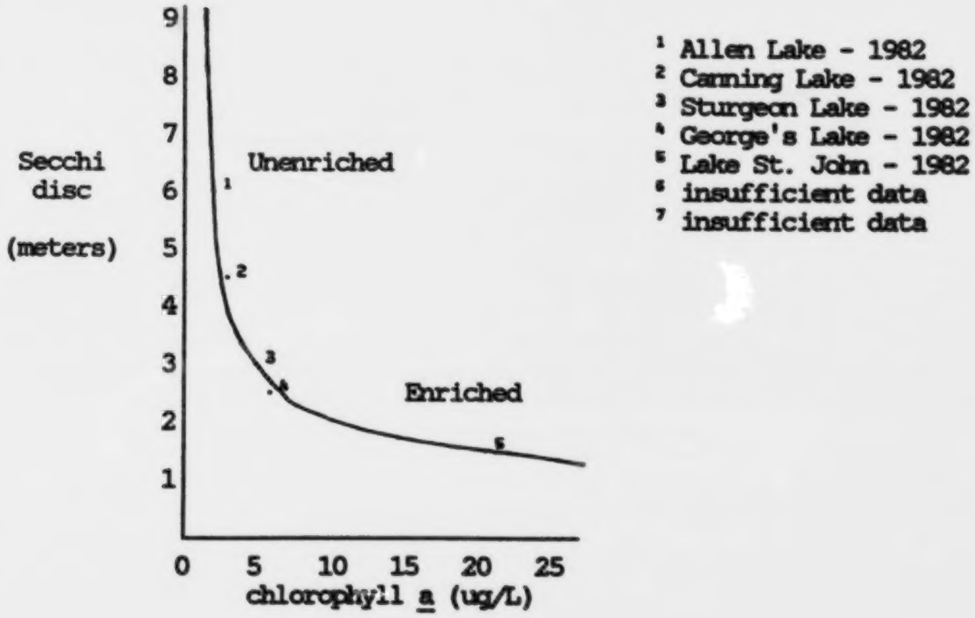
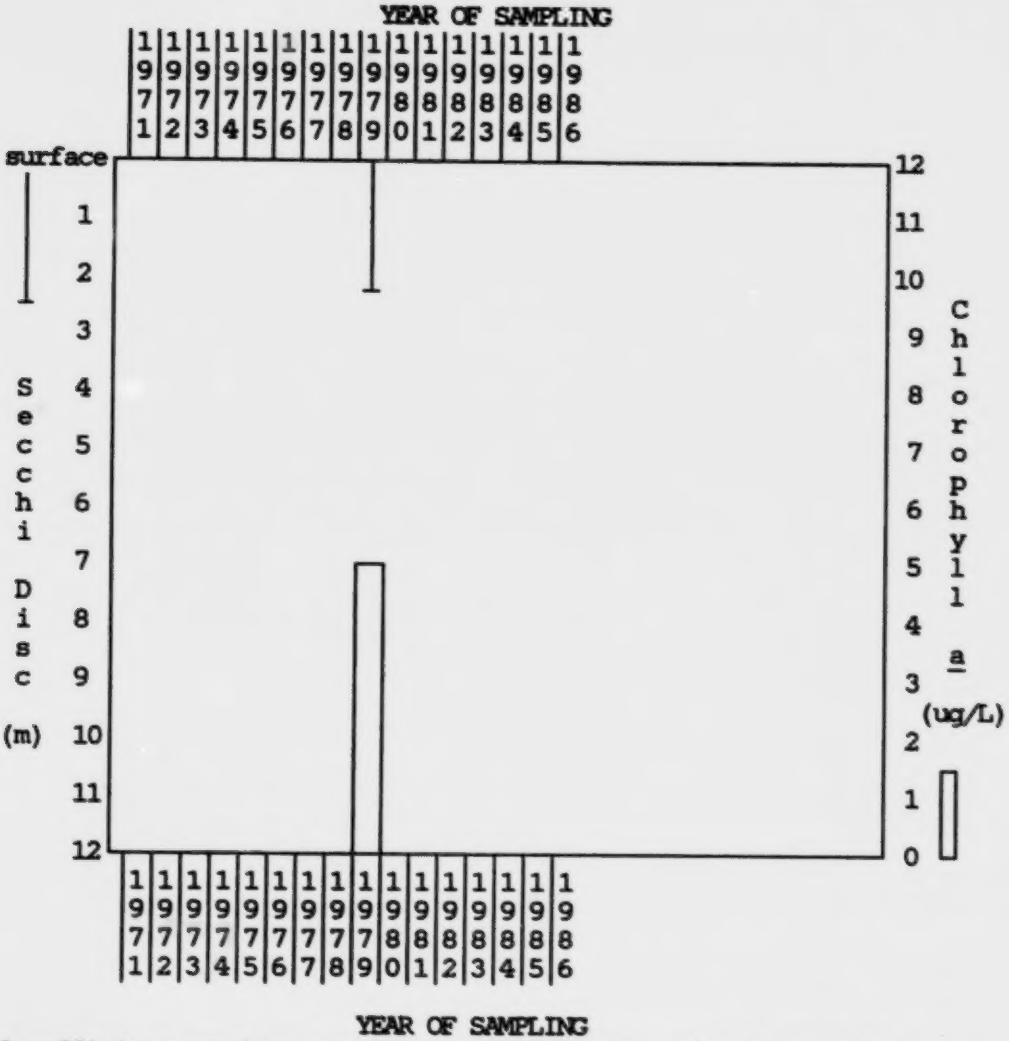
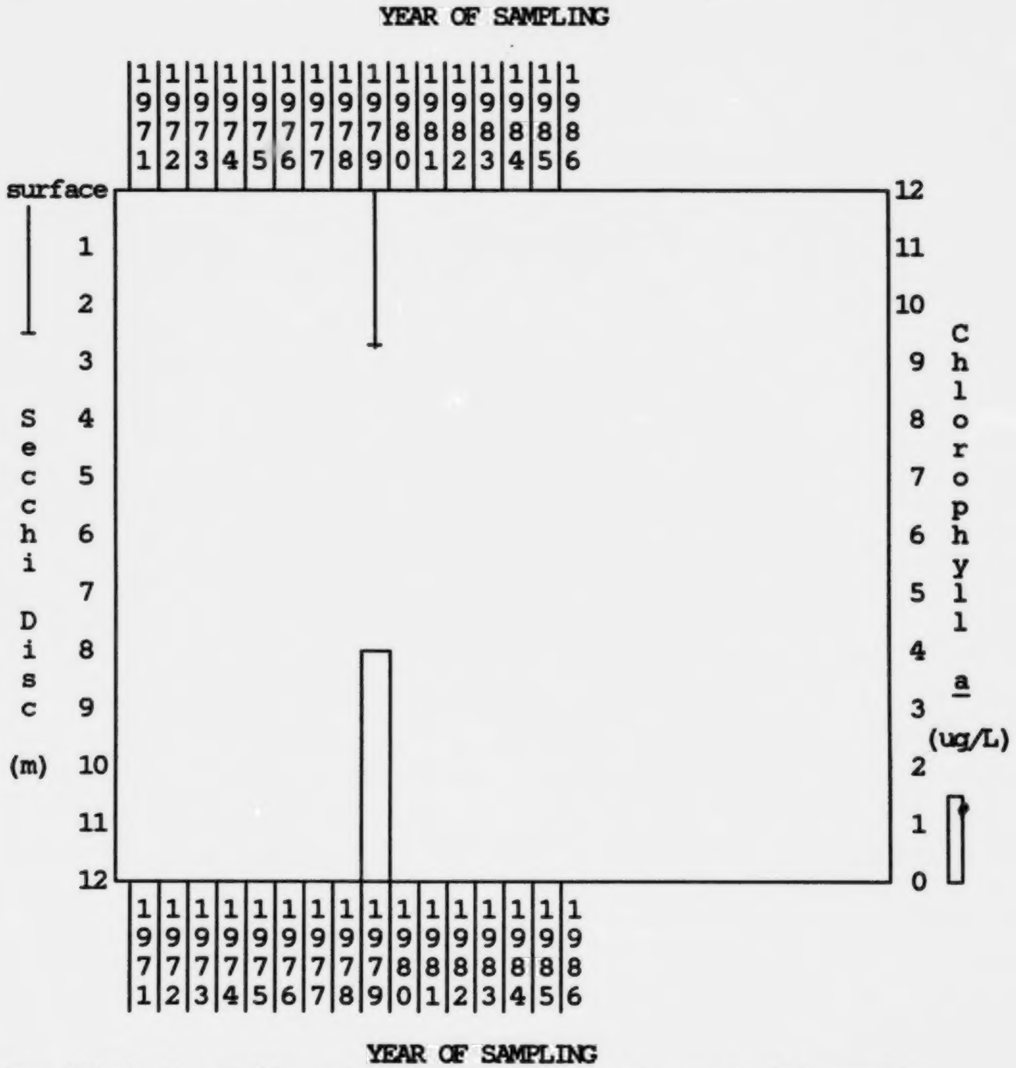


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Morrison Lake (North Bay) from 1979. Seasonal mean data (more than 6 sampling dates) only. A minimum of 4 results was required for graphing.



Insufficient sampling was done in 1985 to enter the data on the graph. We hope that sampling in 1986 is done with increased frequency in order to obtain meaningful results.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Morrison Lake (South Bay) from 1979. Seasonal mean data (more than 6 sampling dates) only. A minimum of 4 results was required for graphing.



Insufficient sampling was done in 1985 to get meaningful results. We hope that sampling in 1986 is done with increased sampling frequency.

Mountain Lake

Minden Township

County of Haliburton

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Mountain Lake in 1985

Station	North		South	
Date	S.D.	Chl.a	S.D.	Chl.a
Aug 5	6.5	U R	7.5	2.5
Aug 11	6.0	1.6	7.5	1.6
Aug 31	5.0	2.1	6.5	2.3
	-----	-----	-----	-----

U R - unreliable sample result
Insufficient sampling was done in 1985 to obtain meaningful data. Based on the information available, the degree of water transparency was high and the densities of suspended algae were moderately low. In 1986, we recommend that sampling be done on 6 occasions if possible.

Figure 1: The relationship between Secchi disc and chlorophyll a for a number of recreational lakes in the province. All data are seasonal means.

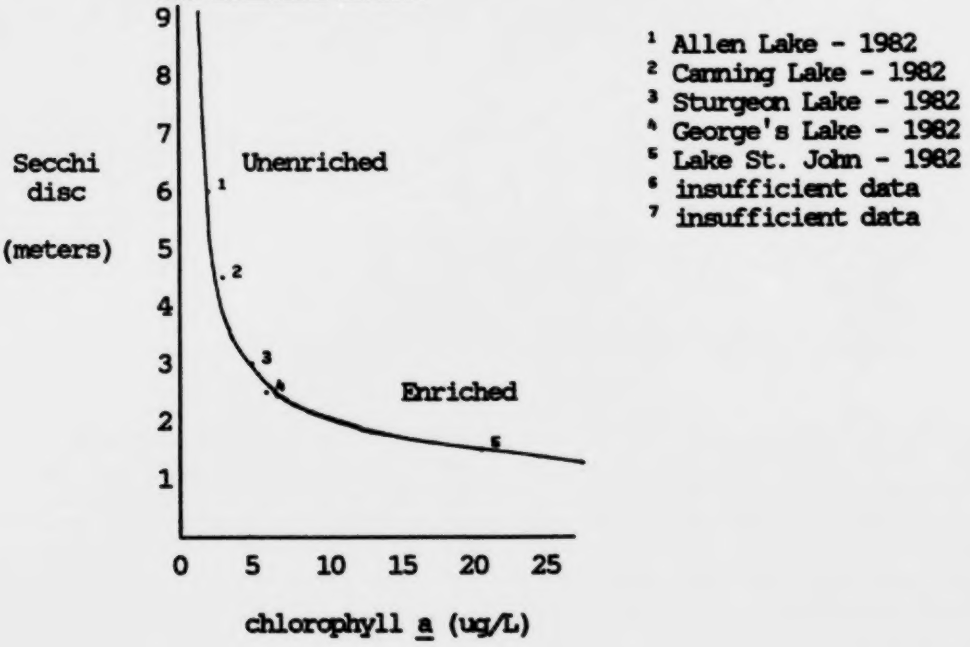
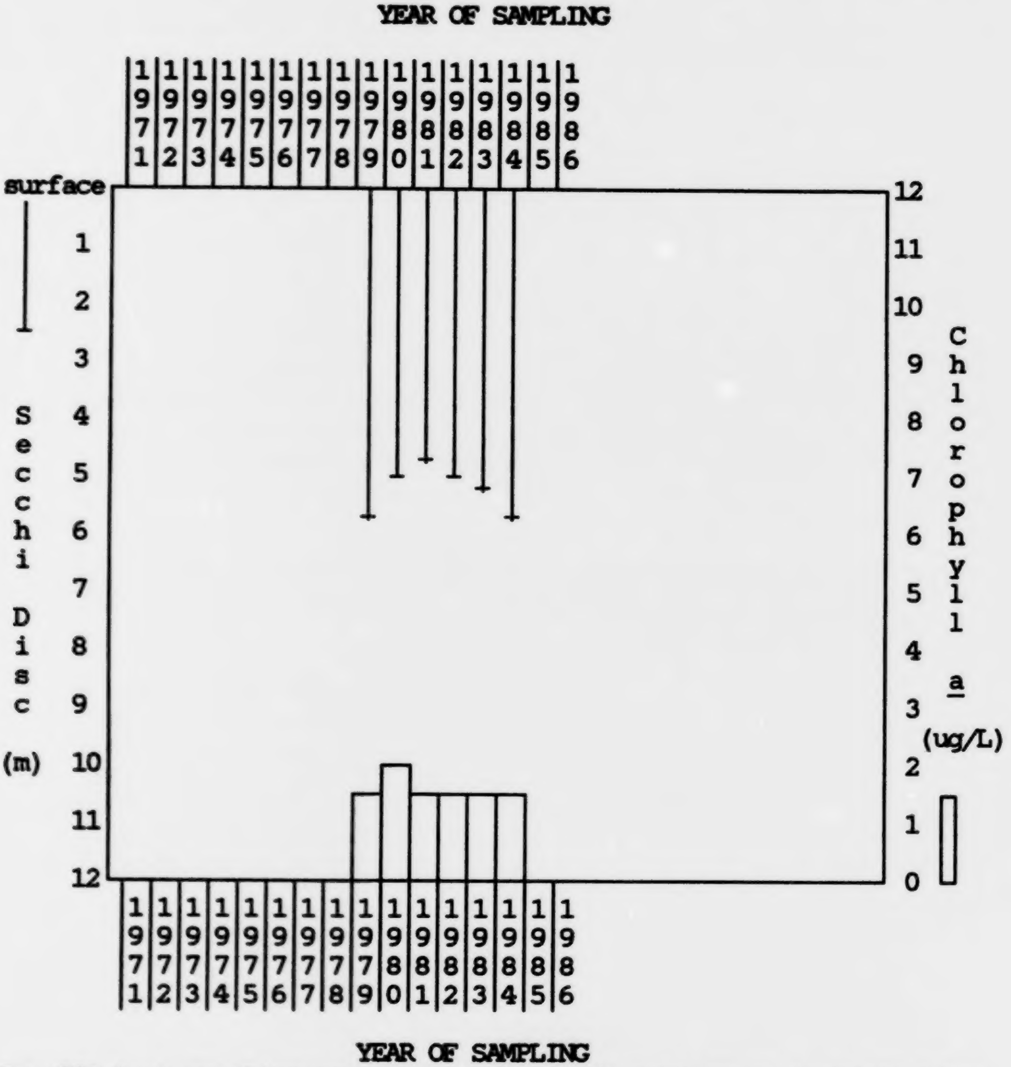


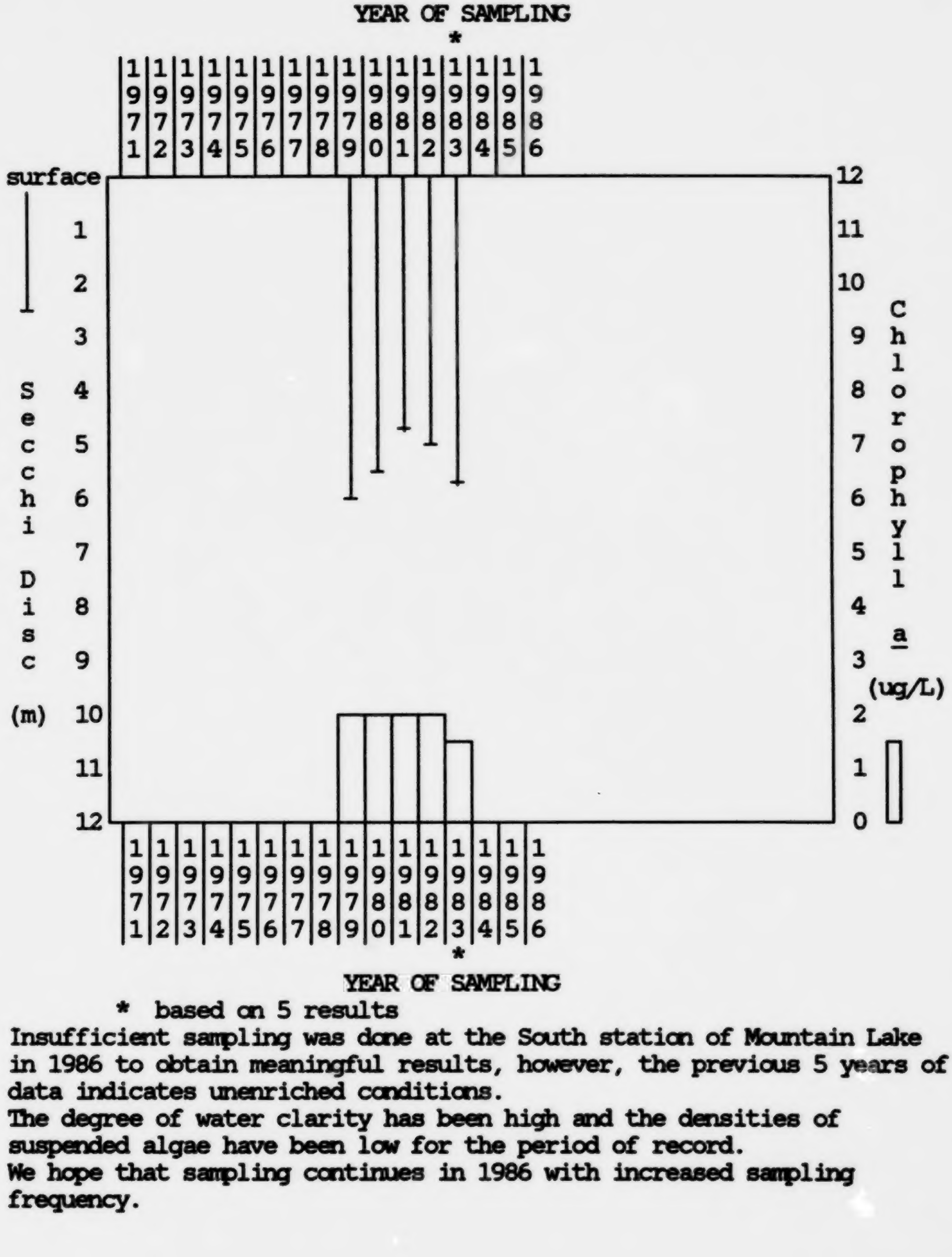
Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Mountain Lake (North station) from 1979 to 1984. Seasonal mean data (more than 6 sampling dates) only. A minimum of 4 results was required for graphing.



Insufficient sampling was done at the North station of Mountain Lake in 1985 to plot the data, however the previous 6 years of data indicates that the degree of water clarity has been consistently high and densities of suspended algae have been low for the period of record.

We hope that sampling continues in 1986 at this location with increased frequency.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Mountain Lake (South station) from 1979 to 1983. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* based on 5 results

Insufficient sampling was done at the South station of Mountain Lake in 1986 to obtain meaningful results, however, the previous 5 years of data indicates unenriched conditions.

The degree of water clarity has been high and the densities of suspended algae have been low for the period of record.

We hope that sampling continues in 1986 with increased sampling frequency.

Muldrew Lake (page 1)

Muskoka, Wood & Morrison Wards
Town of Gravenhurst

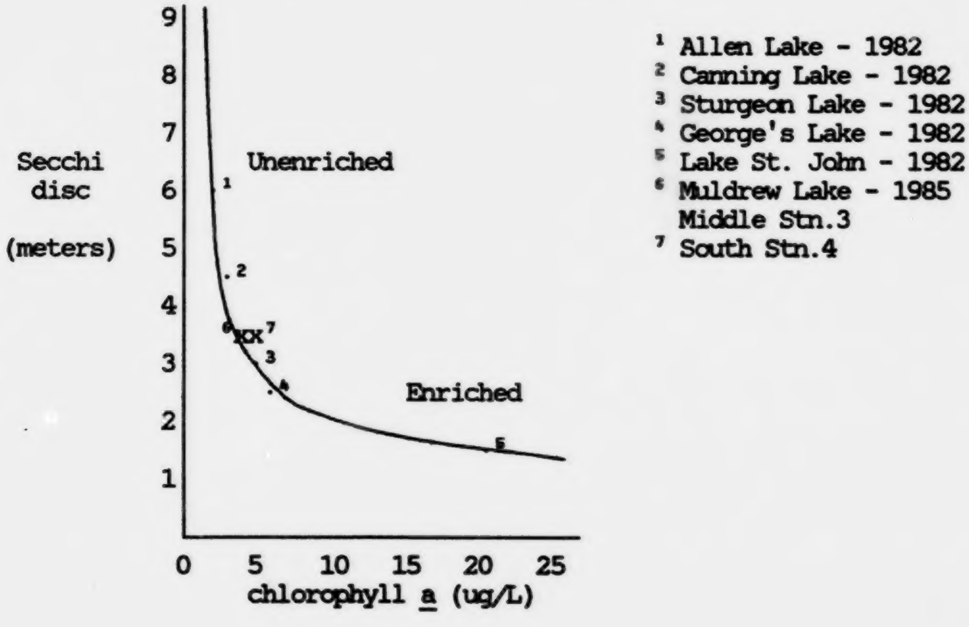
District Municipality of
Muskoka

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Muldrew Lake in 1985

Station	Middle Muldrew Stn.3		South Muldrew Stn.4	
Date	S.D.	Chl.a	S.D.	Chl.a
July 28	3.25	2.9	3.25	3.6
Aug 11	4.0	4.4	- -	- -
Aug 17	4.0	4.4	4.0	5.1
Sept 1	3.25	9.1	3.5	10.8
Sept 15	3.13	1.7	3.13	1.5
Sept 22	3.0	2.7	3.13	1.9
	3.4	4.2	3.4	4.6

In 1985, a good program was done on Muldrew Lake with sampling done on 6 occasions. Secchi disc readings were moderately low at both stations averaging 3.4 m, indicating a low degree of water clarity. Chlorophyll a concentrations were high at both stations with an algae bloom occurring at the beginning of September. The average concentration was 4.2 ug/L at Middle Muldrew Stn. 3 and 4.6 ug/L at South Muldrew Stn. 4. Based on these results, Middle and South Muldrew Lakes would be considered moderately enriched with periodically high densities of suspended algae.

Figure 1: The relationship between Secchi disc and chlorophyll a for Muldrew Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means.



Muldrew Lake (page 2)

Town of Gravenhurst

District Municipality of Muskoka

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Muldrew Lake in 1985

Station Date	North Stn.5 S.D.	 Chl.a	Woods Bay Stn.1 S.D.	 Chl.a	Miramichi Stn.2 S.D.	 Chl.a
May 19	- -	- -	4.0	2.3	4.0	2.3
July 28	3.0 *	3.0 *	- -	- -	- -	- -
Aug 4	3.3 *	2.9 *	3.0	3.5	3.2	4.2
Aug 11	3.0 *	3.8 *	2.4	6.1	2.4	3.3
Aug 18	3.3 *	6.4 *	- -	- -	- -	- -
Aug 24	3.3 *	8.7 *	- -	- -	- -	- -
Sept 2	2.8 *	5.1 *	2.9 *	10.5 *	2.3 *	14.4 *
Oct 13	- -	- -	2.8 *	5.7 *	2.8 *	6.0 *
	-----	-----	-----	-----	-----	-----
	3.1	5.0	2.7	7.0	2.8	6.5

* - sampling location and/or sampling date not given

North Muldrew Lake would be considered enriched with low average Secchi disc readings ranging from 2.7 m in Woods Bay to 3.1 m at the North station. Chlorophyll a concentrations were high at all stations with averages ranging from 5.0 ug/L at North station to 7.0 ug/L at Woods Bay. The highest densities of suspended algae occurred on Sept. 2 at Woods Bay and Miramichi.

Water quality of North Muldrew Lake would be considered enriched.

In 1986, please be sure to enter the sampling date and station name on the submission forms for all samples.

Figure 1: The relationship between Secchi disc and chlorophyll a for Muldrew Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means.

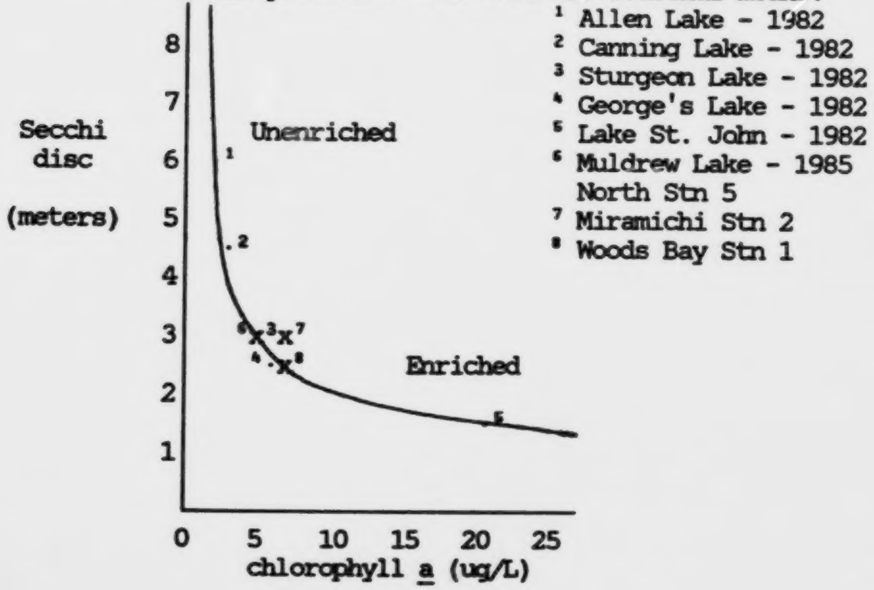
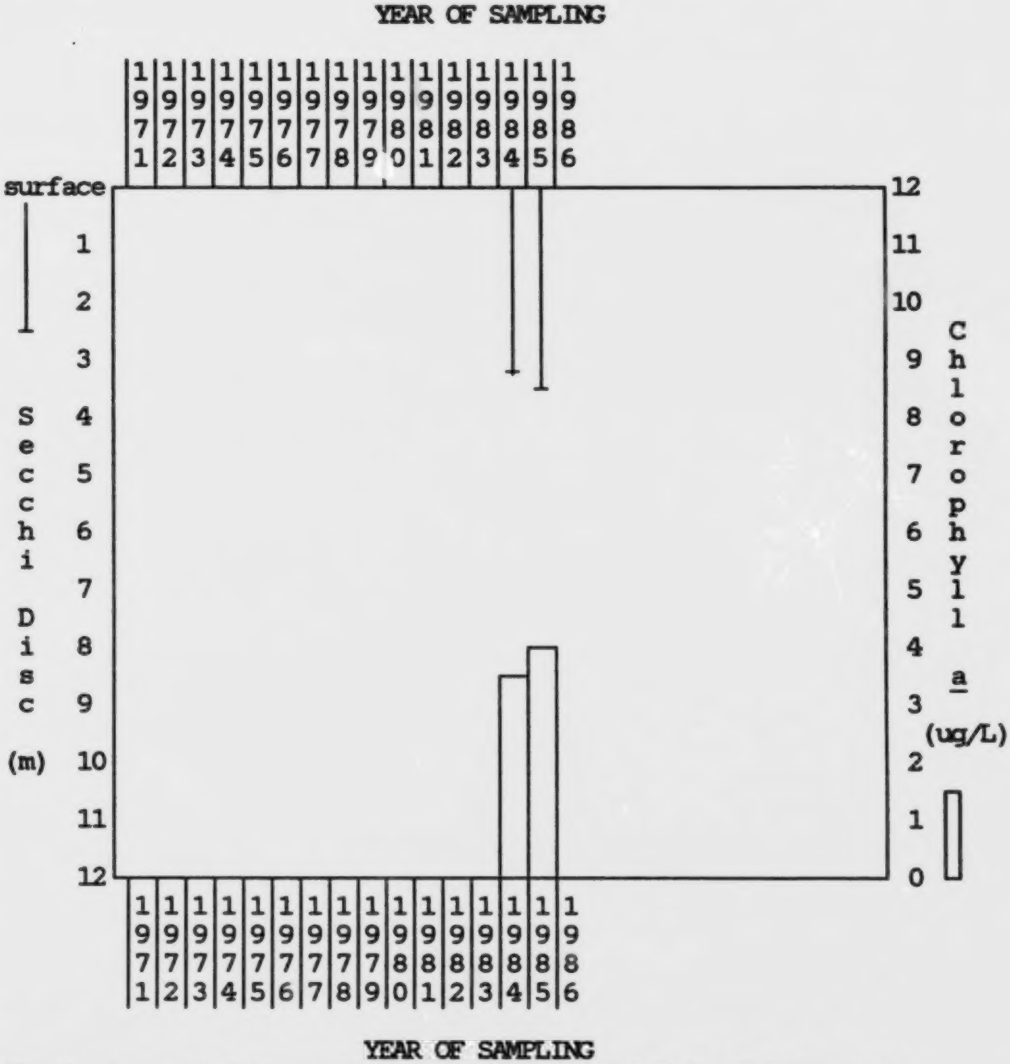
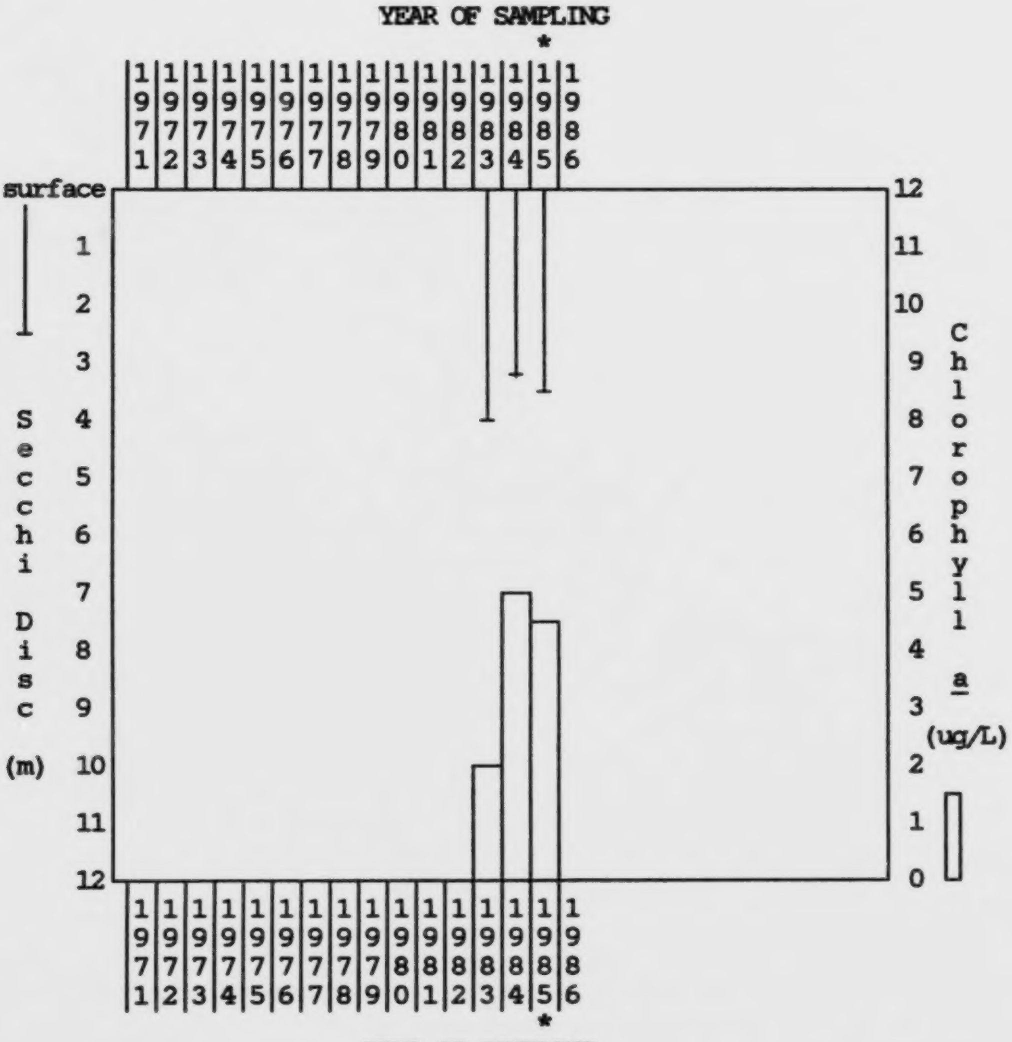


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Muldrew Lake (Middle Station 3) from 1984 to 1985. Seasonal mean data (more than 6 sampling dates) only.



The 2 years of data available for Station 3 Middle Muldrew Lake indicate moderately enriched conditions in 1984 and 1985.
We hope sampling continues in 1986 to establish a long-term record of water quality for this station.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Muldrew Lake (South Station 4) from 1983 to 1985. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.

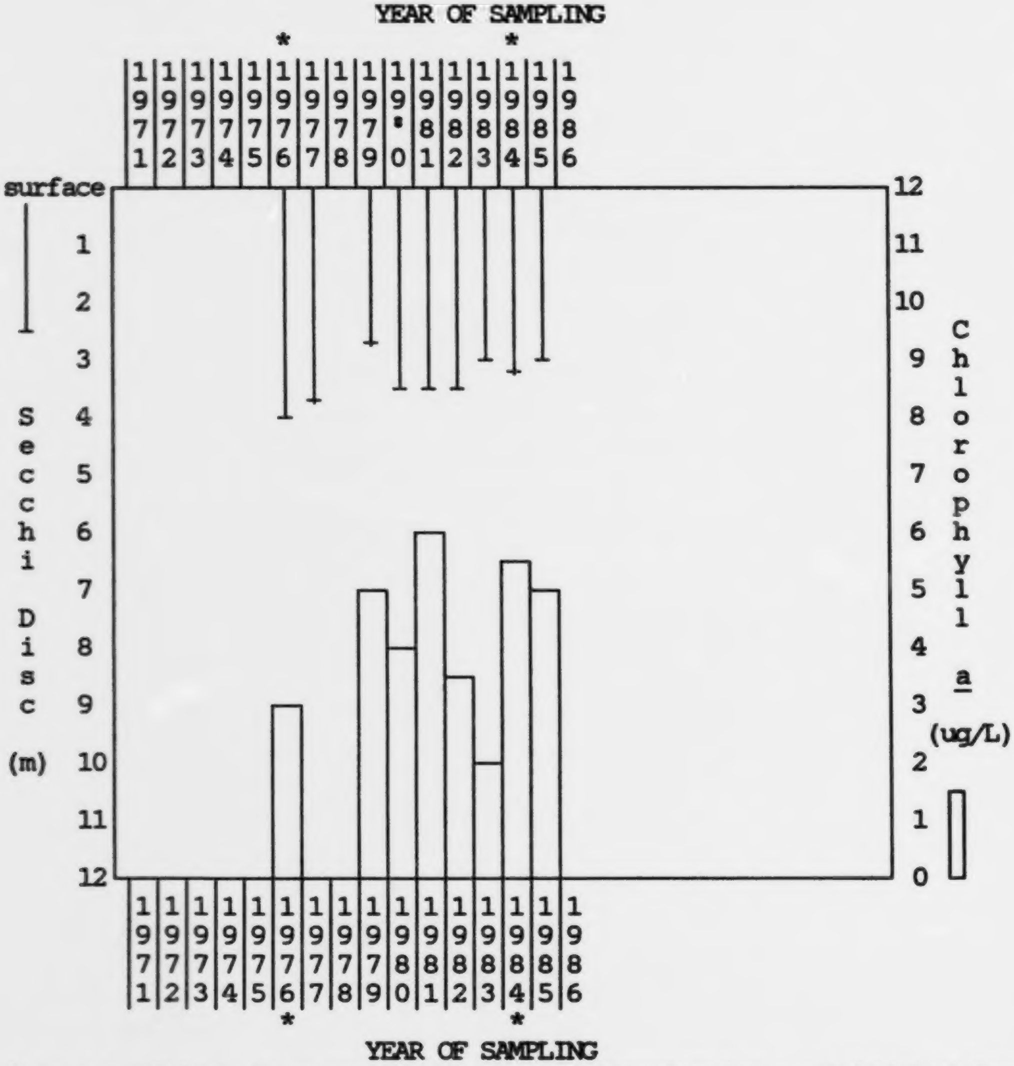


* based on 5 results

We now have 3 years of data for South station 4 on Muldrew Lake. The degree of water clarity has been moderately low during that time and densities of suspended algae have fluctuated from low to high. This reflects the moderately enriched conditions of the lake at this location.

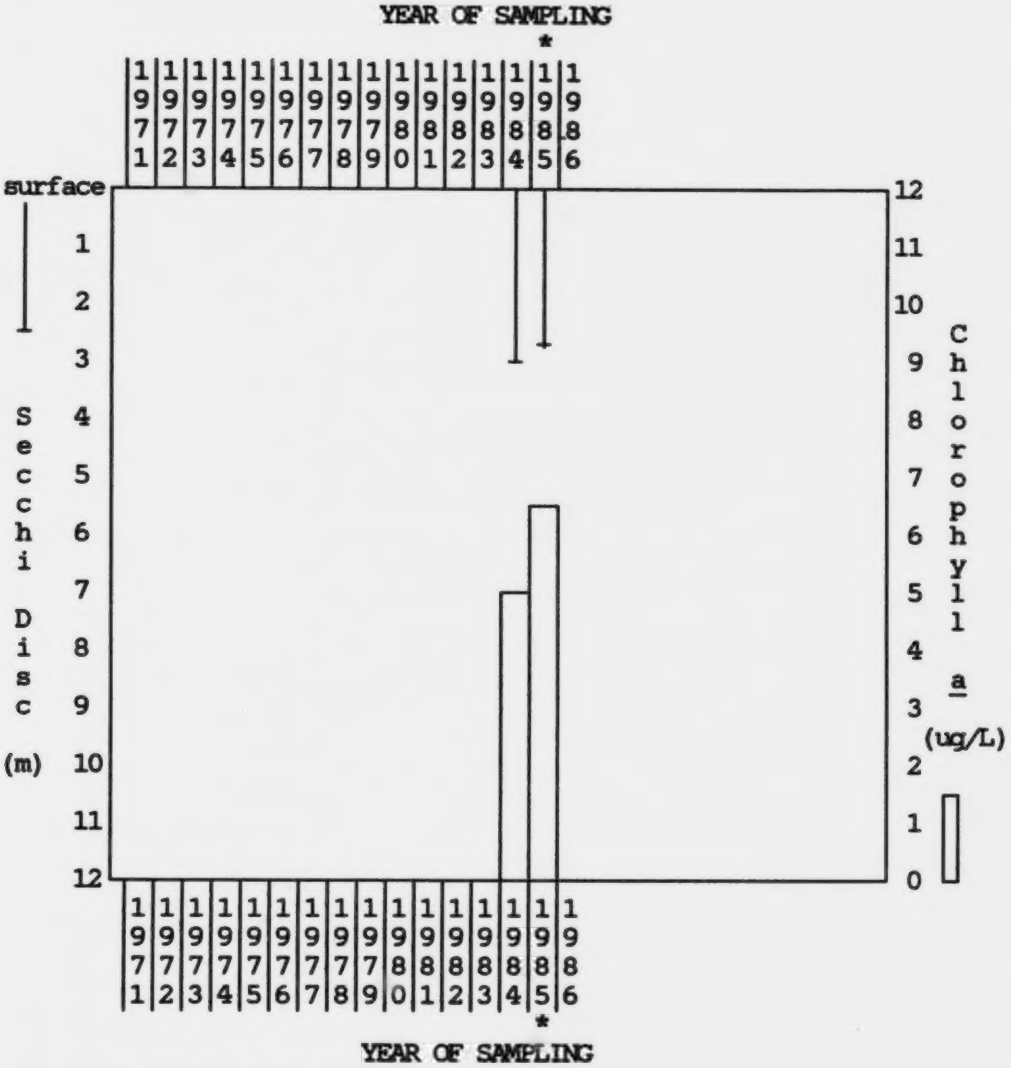
We hope that you continue to sample for this program in 1986.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Muldrew Lake (North Station 5) from 1977 to 1985. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



A very good long-term record of water quality has been established for the North station 5 of Muldrew Lake.
The degree of water clarity has been moderately low for most of that period with Secchi disc readings in the range of 2.7 m to 3.9 m.
Densities of suspended algae have fluctuated from moderately low to high indicating that water quality conditions are moderately enriched to enriched at this location.
No obvious trends to indicate an overall change in water quality can be defined.
We hope that sampling is done in 1986 to maintain the continuous water quality record for this station.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Muldrew Lake (Woods Bay Station 1) from 1984 and 1985. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.

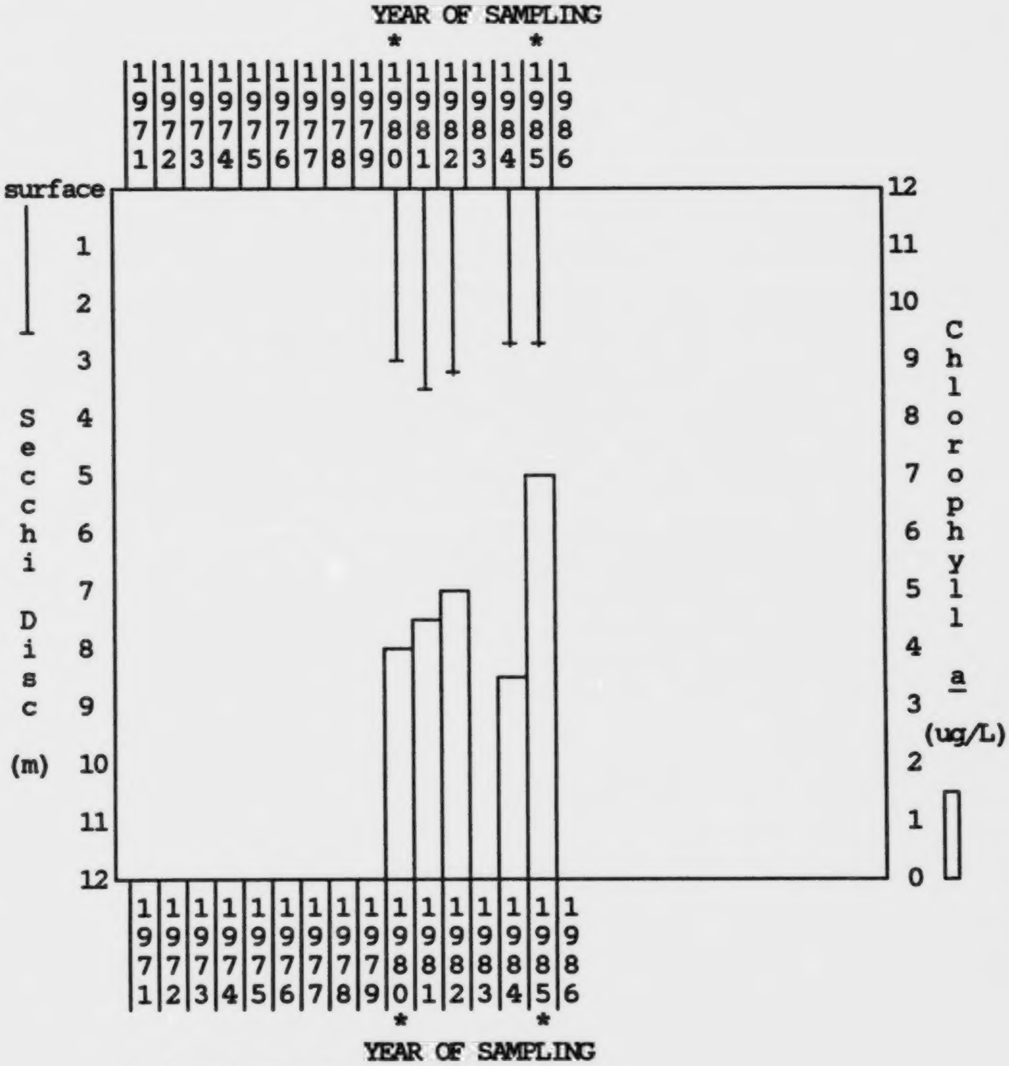


* based on 4 results

The 2 years of available data for the Woods Bay station of Muldrew Lake indicate enriched conditions with a low degree of water clarity and high densities of suspended algae.

We hope that sampling continues at this station in 1986.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Muldrew Lake (Miramichi Station 2) from 1981 to 1985. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* based on 4 or 5 results

Sampling at Miramichi station 2 has been done for 5 years.
These results indicate a low degree of water clarity and high densities of suspended algae, indicating enriched conditions.
We hope that you continue to sample in 1986 to maintain the record of water quality for this station.

Muskoka Bay

Muskoka Ward
Town of Gravenhurst

District Municipality of
Muskoka

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Muskoka Bay in 1985

Station	Parker's Point		Cliff Rock		Centre Bay	
Date	S.D.	Chl.a	S.D.	Chl.a	S.D.	Chl.a
Aug 5	4.0	3.6	3.5	1.8	4.0	L 1.0
Sept 2	4.5	3.0	4.0	2.9	4.5	3.2
	-----	-----	-----	-----	-----	-----

L - less than
Insufficient sampling was done on Muskoka Bay in 1985 to obtain meaningful results.
If sampling is continued in 1986, we recommend that at least 6 samples be taken per location throughout the season.

Figure 1: The relationship between Secchi disc and chlorophyll a for Muskoka Bay in 1985 and a number of recreational lakes in the province. All data are seasonal means.

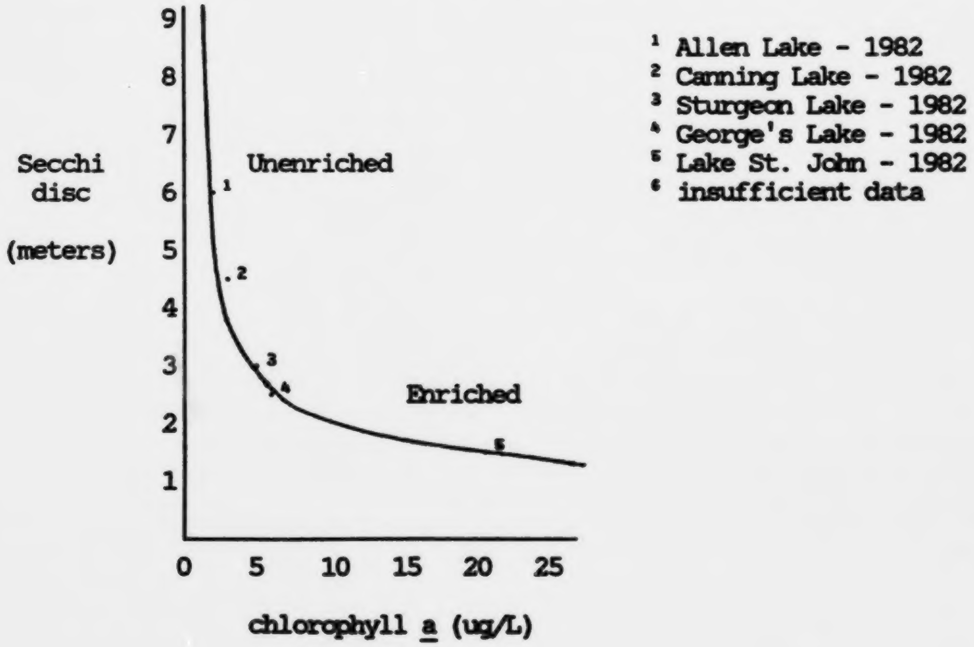
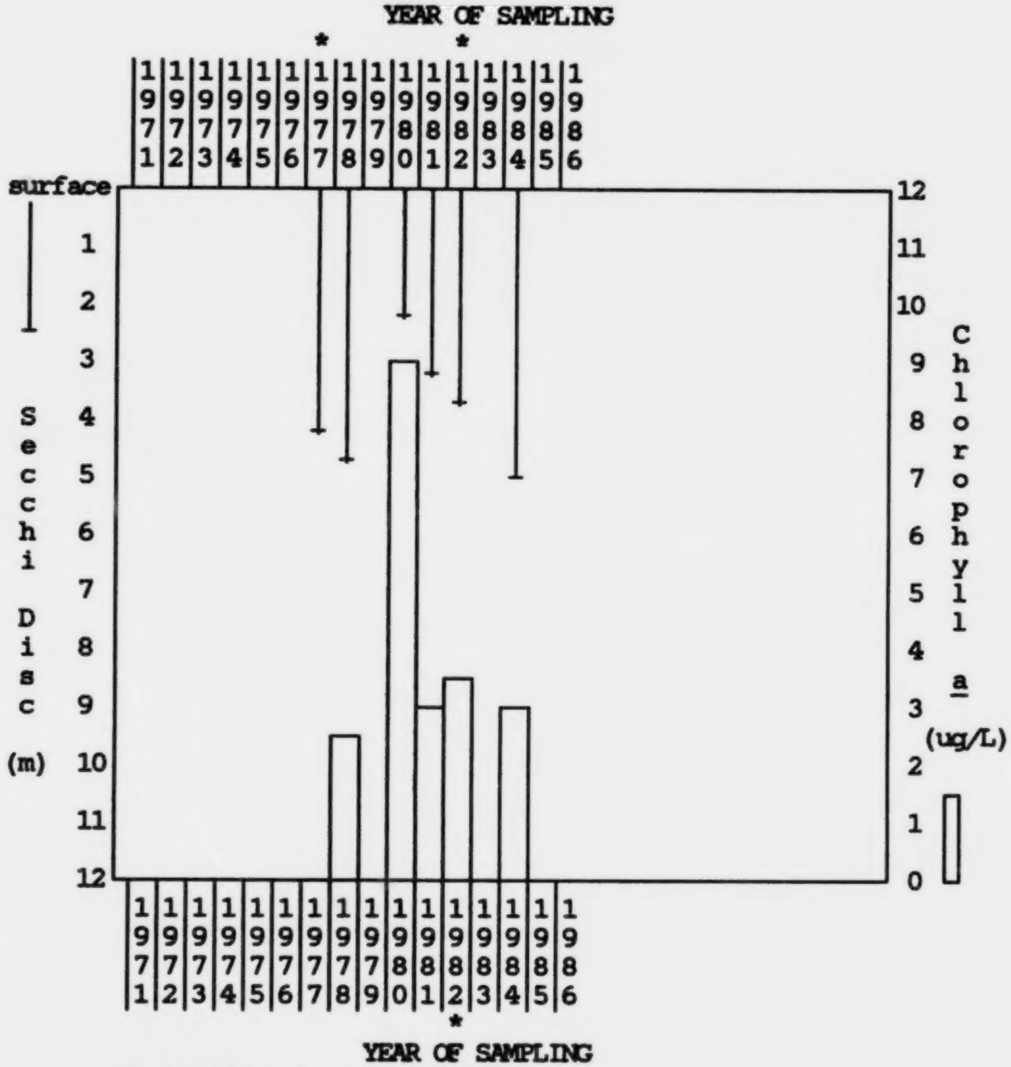


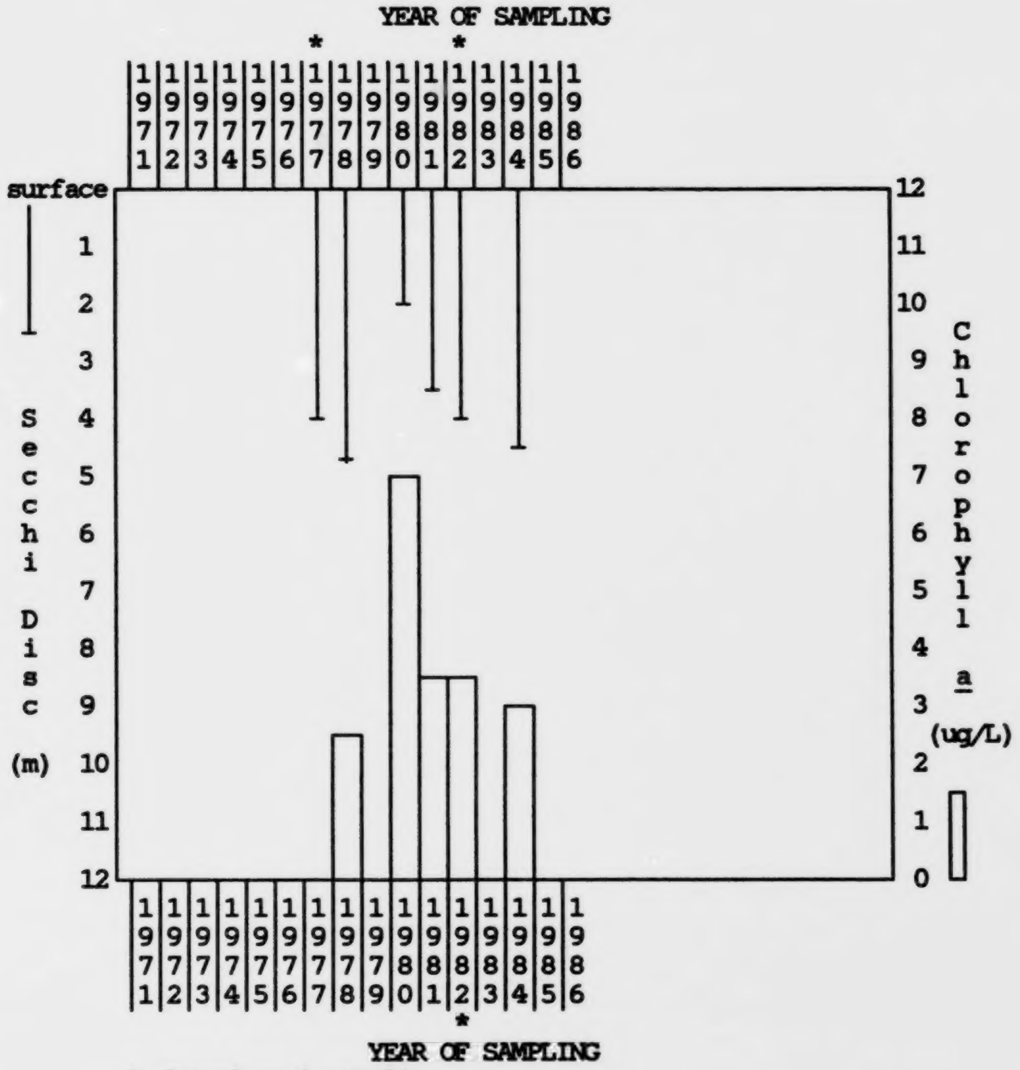
Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Muskoka Bay (Parker's Point) from 1978 to 1984 Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* based on 4 or 5 results

The 6 years of available data from the Parker's Point station on Muskoka Bay indicate that the degree of water clarity has usually been moderately high except for 1980 when the clarity was low. Densities of suspended algae have usually been moderate with high densities in 1980 as the result of an algae bloom.
We hope that sampling is done at this station in 1986 with increased frequency.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Muskoka Bay (Cliff Rock) from 1978 to 1984. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



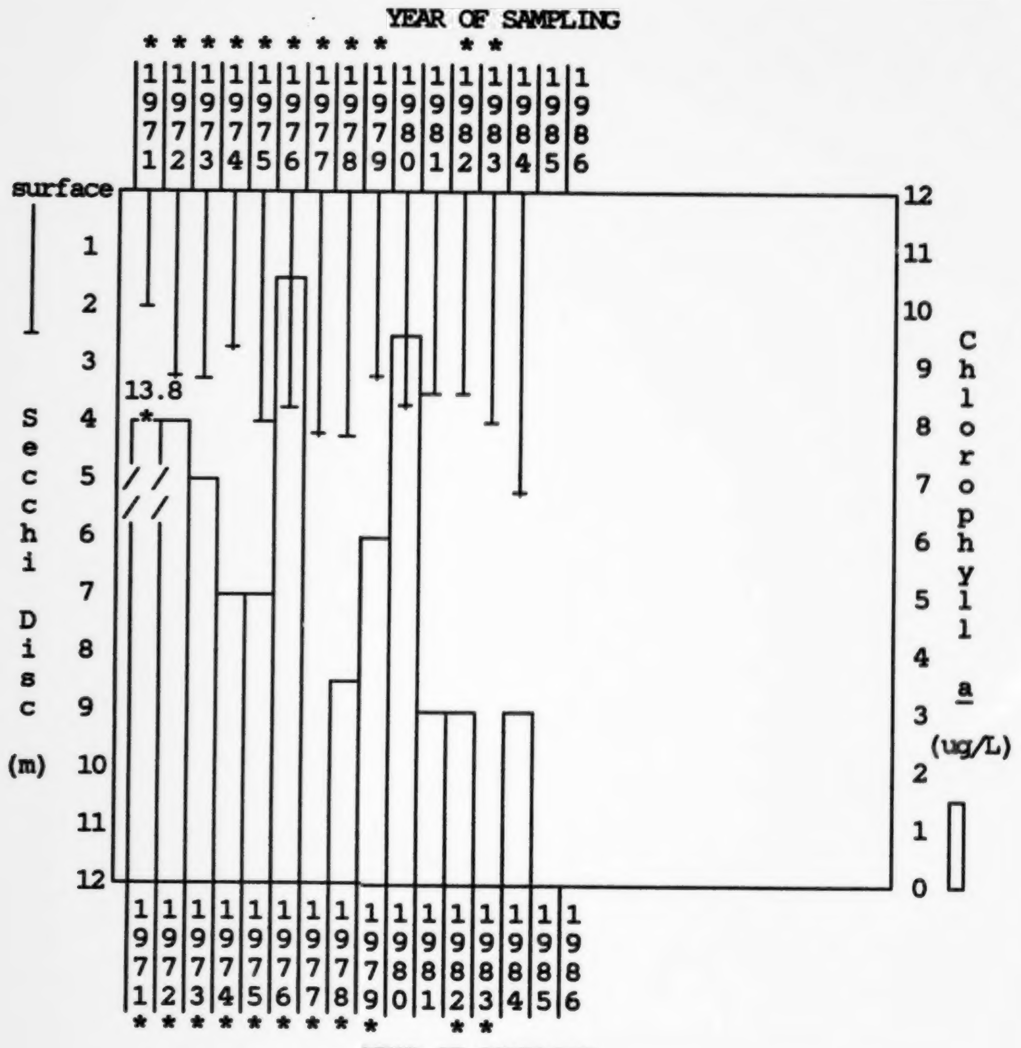
* based on 4 results

Insufficient sampling was done at this station in 1985 to obtain meaningful results.

Past results indicate generally moderately enriched conditions with a moderate degree of water clarity and moderate densities of suspended algae. There are occasions, such as 1980, when data indicates enriched conditions.

We hope that sampling continues in 1986 with increased frequency.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Muskoka Bay (Centre) from 1971 to 1984. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* MOE data - 1971 chlorophyll a concentration higher than scale

There are 14 years of available data from the Centre station in Muskoka Bay.

The degree of water clarity has generally been moderate for the period of record. In 1971, a low degree of clarity was observed and in 1984 a high degree of clarity was recorded. Insufficient sampling was done at this location in 1985 to obtain meaningful results.

Densities of suspended algae in Muskoka Bay have fluctuated widely but have been generally high with periodic algae blooms.

We hope that sampling is done at this station in 1986 with increased frequency.

Oak Lake

Belmont & Methuen Townships

Peterborough County

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Oak Lake in 1985

Station	Jean P Island		Trout Island		North Bay	
Date	S.D.	Chl.a	S.D.	Chl.a	S.D.	Chl.a
June 9	4.0	1.8 **	6.5	1.8 **	4.5	1.9 **
Sept 2*	3.0	3.6 **	4.0	2.9 **	3.5	3.0 **
Sept 22*	4.0	2.6 **	4.5	2.4 **	3.5	2.3 **
	-----	-----	-----	-----	-----	-----

* date and/or station location not given
**chlorophyll sample taken through depth equal to Secchi depth

Insufficient sampling was done on Oak Lake to obtain any meaningful results. On the 3 occasions when sampling was done the degree of water clarity was high at Trout Island and moderately low at the other stations. Densities of suspended algae were moderately low at all stations. If sampling is done in 1986, it is recommended that the sampling frequency be increased through the ice-free period of the year (at least six samples per site) to permit more reliable seasonal means and to allow interpretation of seasonal changes in algal densities. It is also recommended that a single mid-lake station be chosen for sampling. Effort could then be concentrated on sampling that point with no loss of information as the different points sampled during 1984 had similar quality. Please be sure to enter the station location and sampling dates on all submission sheets and chlorophyll samples should be taken through a depth of twice the Secchi disc reading.

Figure 1: The relationship between Secchi disc and chlorophyll a for a number of recreational lakes in the province. All data are seasonal means.

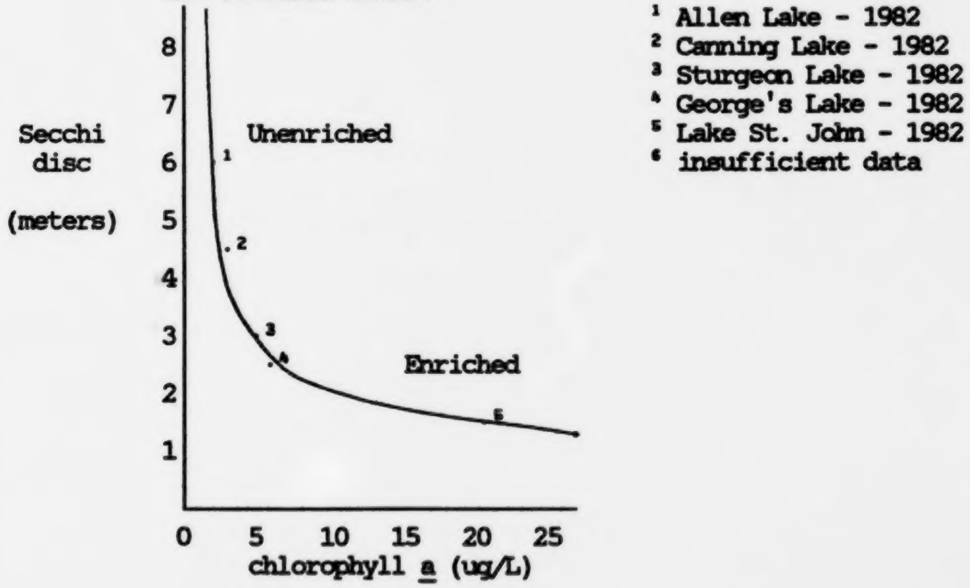
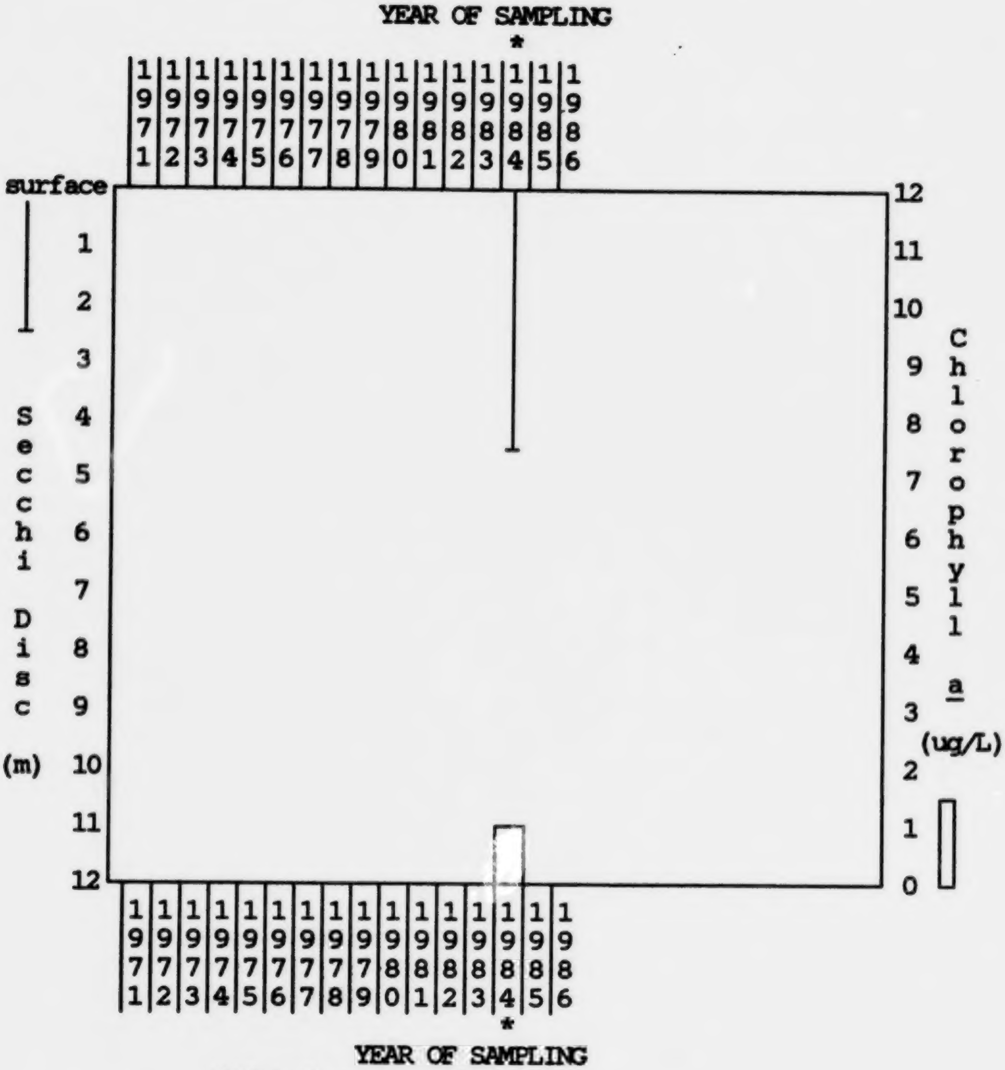


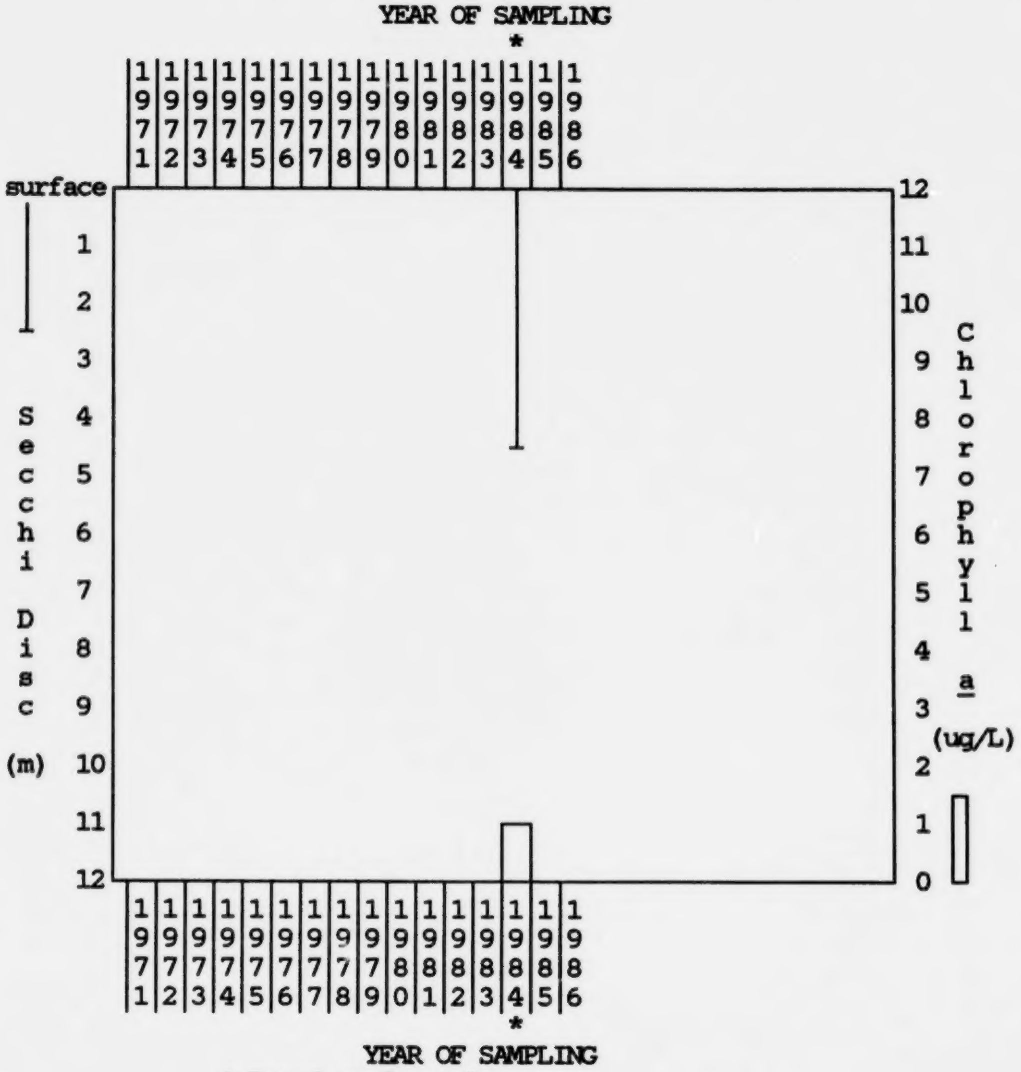
Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Oak Lake (Jean Island) in 1984.
Seasonal mean data (more than 6 sampling dates) only.
A minimum of 4 results was required for graphing.



* Based on 4 samples

Insufficient sampling was done at this location in 1985 to obtain meaningful results. We hope that sampling is done in 1986 with increased frequency.

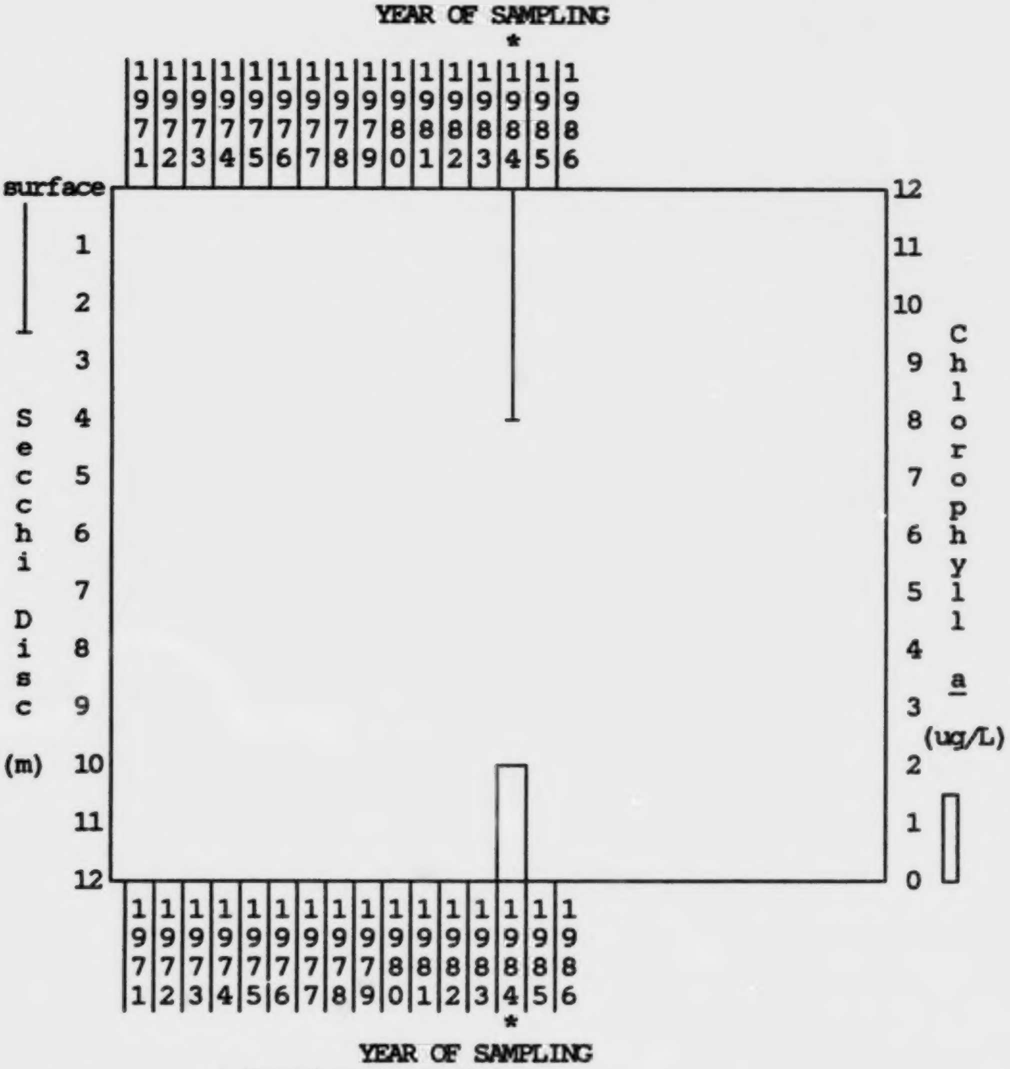
Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Oak Lake (Trout Island) in 1984. Seasonal mean data (more than 6 sampling dates) only. A minimum of 4 results was required for graphing.



* Based on 4 samples

Insufficient sampling was done at this location in 1985 to obtain meaningful results. We hope that sampling is done in 1986 with increased frequency.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Oak Lake (North Bay) from 1984. Seasonal mean data (more than 6 sampling dates) only. A minimum of 4 results was required for graphing.



* Based on 4 samples.

Insufficient sampling was done at this station in 1985 to obtain meaningful results. We hope that sampling is done in 1986 with increased frequency.

Peninsula Lake

Town of Huntsville

District Municipality of Muskoka

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Peninsula Lake in 1985

Station	Wolf Bay		Deerhurst	
Date	S.D.	Chl.a	S.D.	Chl.a
July 27	4.6	2.3	4.1	2.2
Aug 4	4.6	1.7	5.2	2.7
Aug 11	5.2	1.9	6.7	2.0
Aug 17	4.4	1.8	4.9	2.2
	4.7	1.9	5.2	2.3

In 1985, sampling was done on 4 occasions in Peninsula Lake.

Based on the results obtained, the Secchi disc readings were moderately high in Wolf Bay averaging 4.7 m. Readings were slightly higher at Deerhurst with an average of 5.2 m. These results indicate a moderately high degree of water transparency.

Chlorophyll a concentrations were moderately low, averaging 1.9 ug/L at Wolf Bay and 2.3 ug/L at Deerhurst.

Water quality of Peninsula Lake would be classified as borderline between moderately enriched and unenriched.

We will be sending a new rope marked in metres for use in 1986.

Figure 1: The relationship between Secchi disc and chlorophyll a for Peninsula Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means except Peninsula Lake.

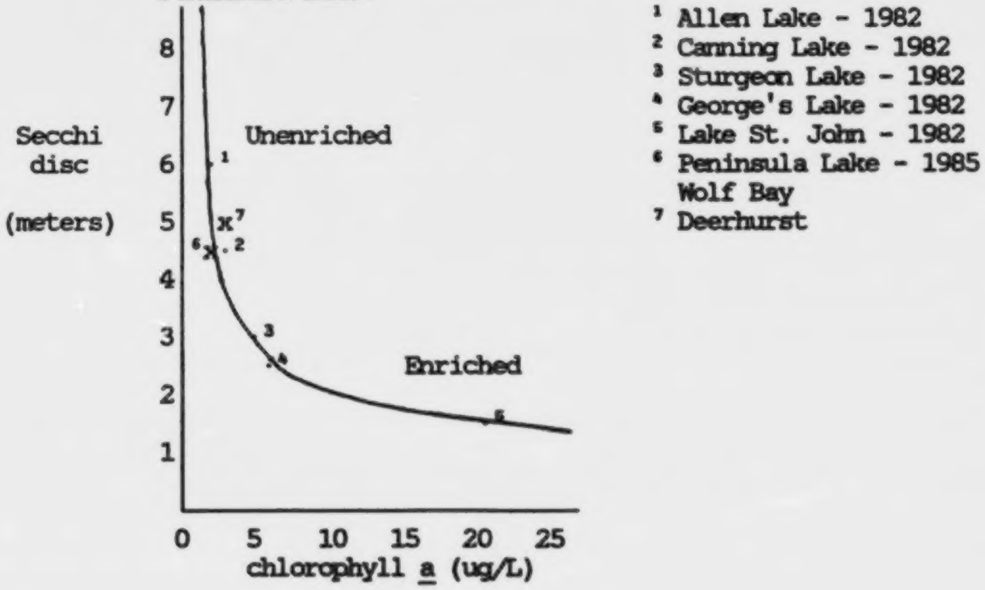
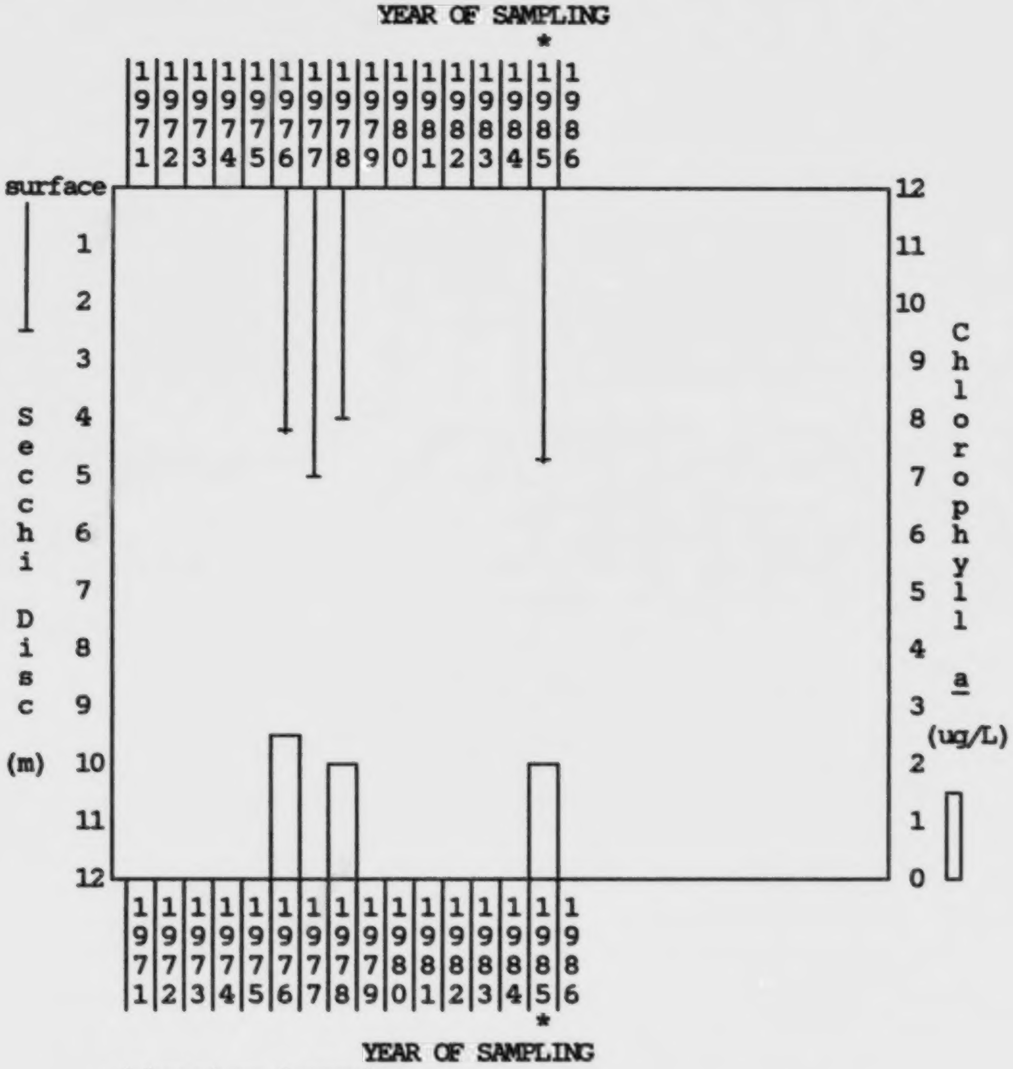


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Peninsula Lake (Wolf Bay) from 1976 to 1985. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



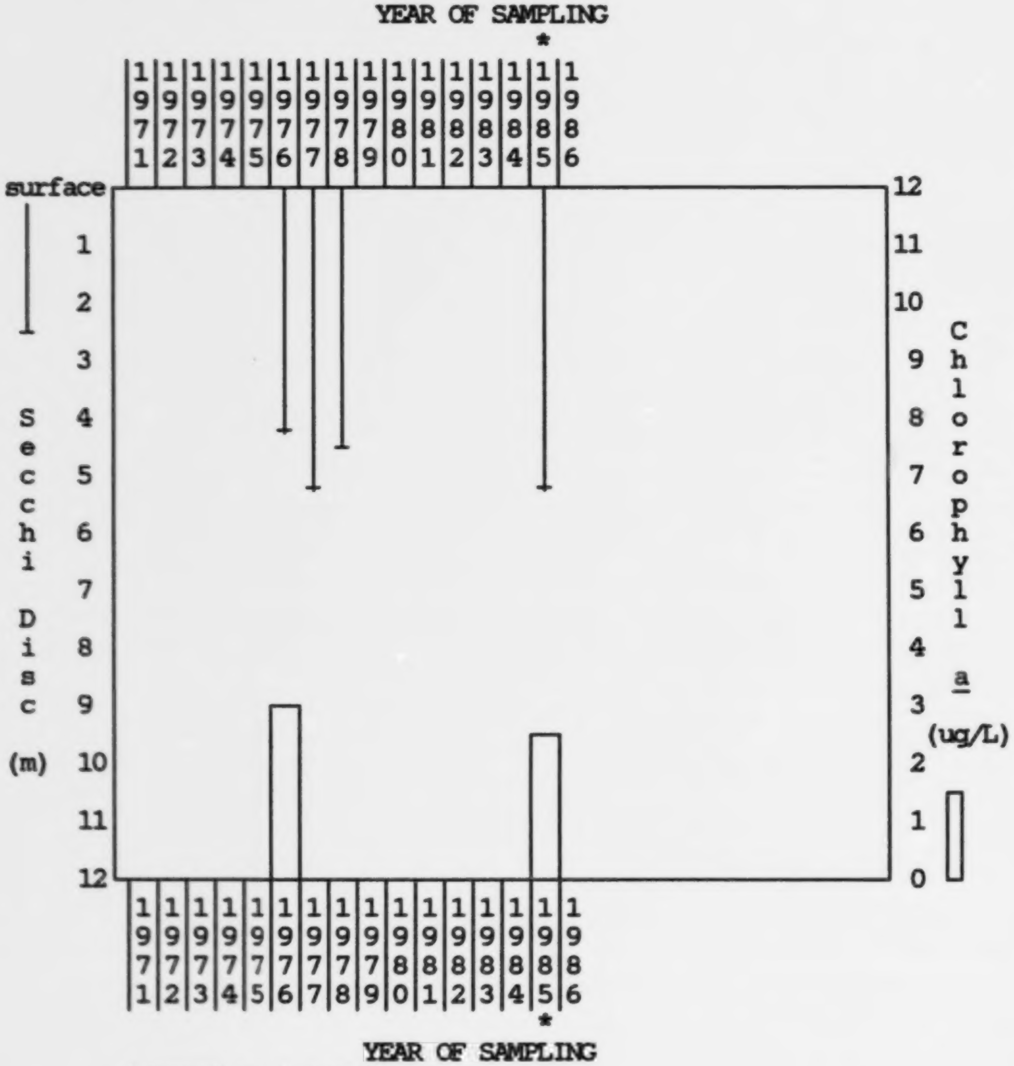
* based on 4 results

The 4 years of available data for Wolf Bay of Peninsula Lake indicate moderately enriched conditions with no change in water quality since 1976.

The degree of water clarity has been moderately high and densities of suspended algae have been moderately low for the period of record.

We hope that sampling is done at this station in 1986.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Peninsula Lake (Deerhurst) from 1976 to 1985. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* based on 4 results

The 4 years of data for the Deerhurst station on Peninsula Lake indicate that the degree of water clarity has been moderately high and densities of suspended algae have been moderately low for the period of record.

We hope that sampling is done in 1986 at this station.

Percy Lake

Harburn Township

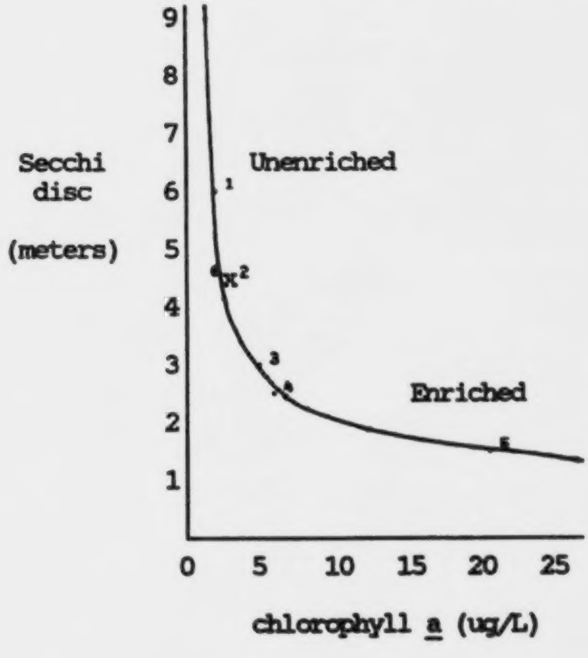
County of Haliburton

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Percy Lake in 1985

Station	Main	
Date	S.D.	Chl.a
July 21	4.3	1.4
July 28	4.3	4.6
Aug 4	4.5	2.7
Aug 11	4.6	2.6
Aug 17	5.1	3.4
	4.6	2.9

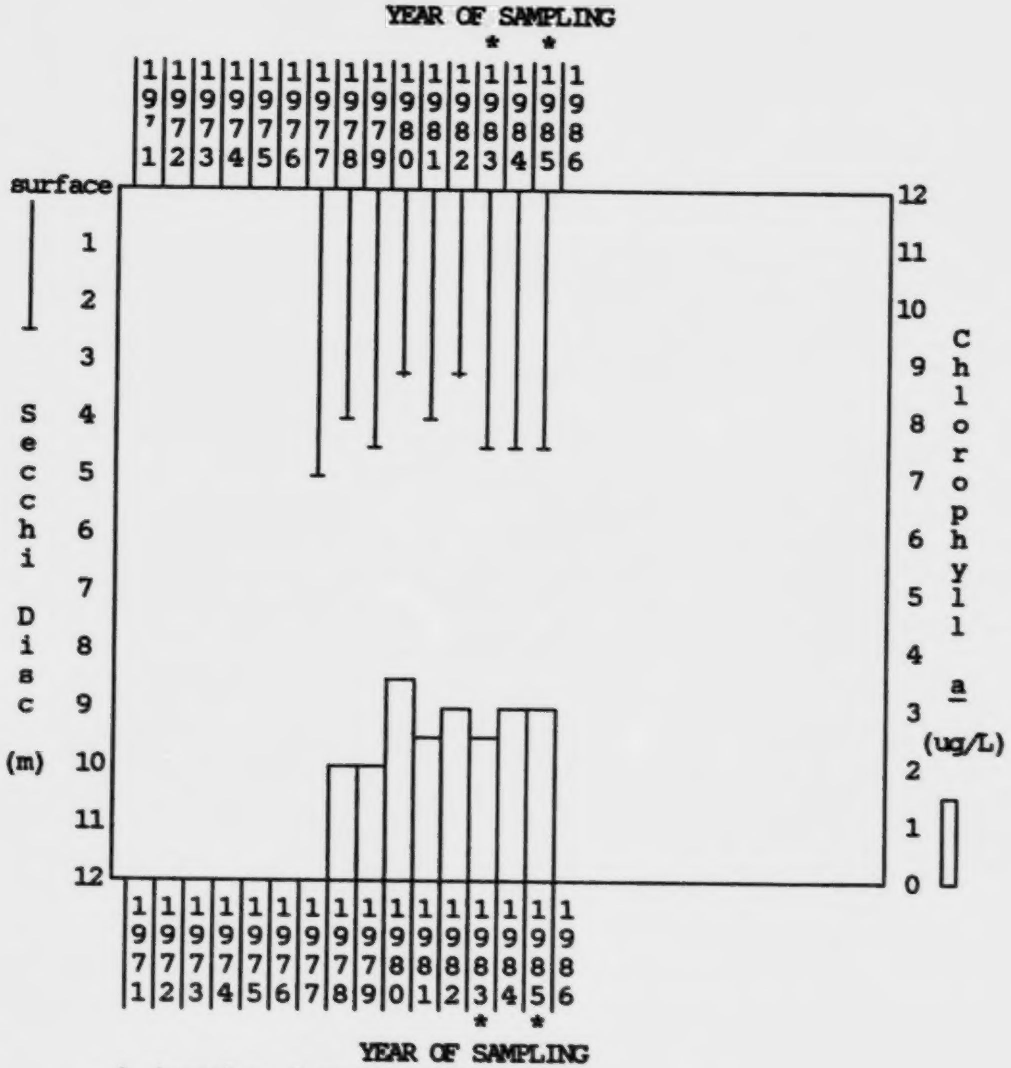
In 1985, sampling was done 5 times on Percy Lake from July 21 to Aug.17. Secchi disc readings indicated a moderately high degree of water clarity, averaging 4.6 m. Chlorophyll a concentrations were moderately low, averaging 2.9 ug/L. Based on the 1985 results, Percy Lake would be considered moderately enriched with good water quality.

Figure 1: The relationship between Secchi disc and chlorophyll a for Percy Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means.



[1] Allen Lake - 1982
[2] Canning Lake - 1982
[3] Sturgeon Lake - 1982
[4] George's Lake - 1982
[5] Lake St. John - 1982
[6] Percy Lake - 1985

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Percy Lake from 1977 to 1985.
Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* based on 4 or 5 results

A good historical record of water quality has been established for Percy Lake with 9 years of data.
The degree of water clarity has usually been moderately high with average Secchi disc readings ranging from 3 to 5 m.
Densities of suspended algae have been moderately low.
There has been no change in water quality in Percy Lake since 1977.
We hope that sampling continues in 1986 at this location to maintain the continuous record of water quality.

Pine Lake

Muskoka & Wood Wards
Town of Gravenhurst

District Municipality of
Muskoka

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Pine Lake in 1985

Station	Upper 1st		Lower 2nd	
Date	S.D.	Chl.a	S.D.	Chl.a
Aug 5	3.8	1.2	3.9	2.5
Aug 11	N G	7.4	N G	3.1
Sept 2	3.2	5.0	3.5	3.5
	-----	-----	-----	-----

Insufficient sampling was done in 1985 to obtain reliable seasonal averages. The 3 sets of results available indicate a moderately low degree of water clarity and moderate to high densities of suspended algae.
In 1986, we recommend that sampling be done at each station 6 times if possible. Please be sure to record the Secchi disc readingd and chlorophyll sample depths on the submission forms for all samples.

Figure 1: The relationship between Secchi disc and chlorophyll a for a number of recreational lakes in the province. All data are seasonal means.

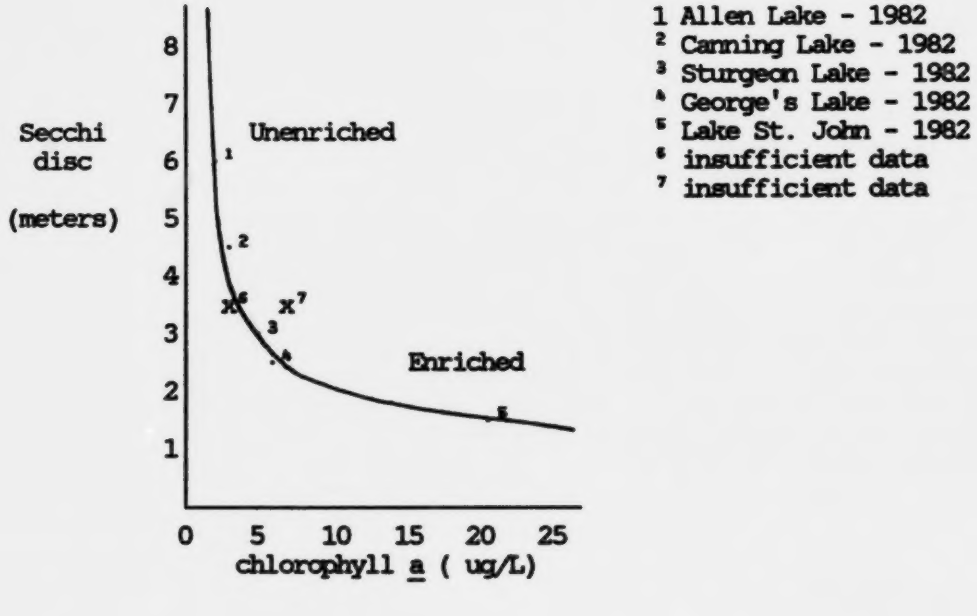
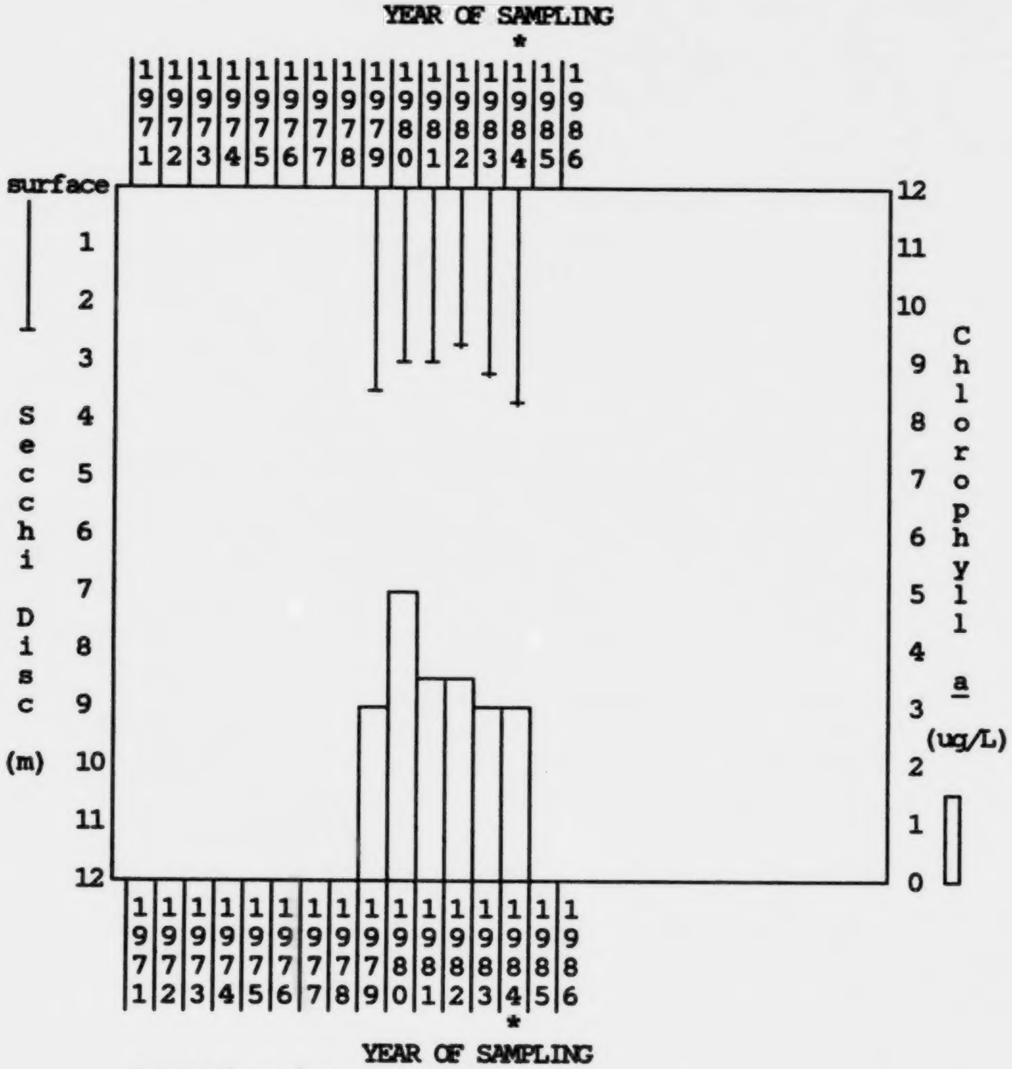


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Pine Lake in Gravenhurst (Upper 1st station) from 1979 to 1984. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.

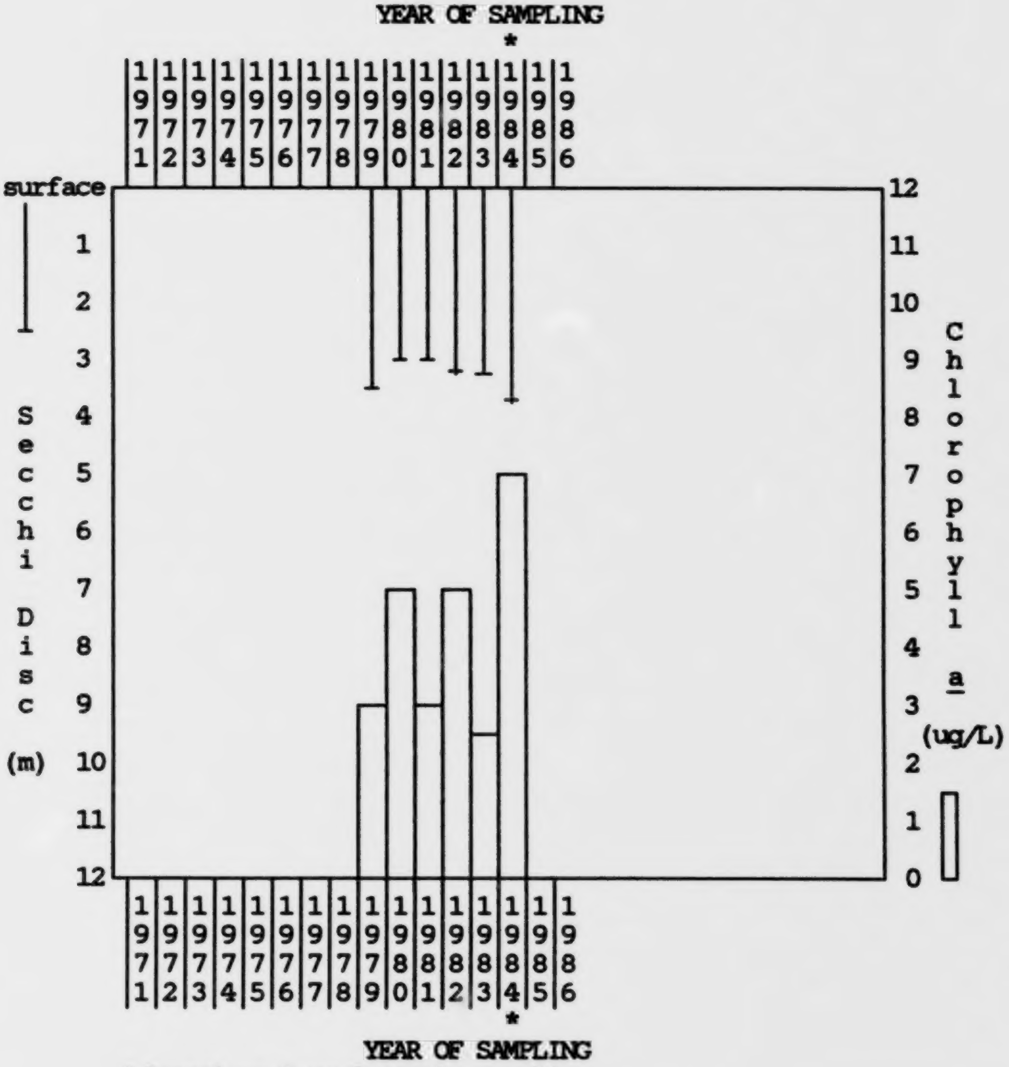


* based on 4 or 5 results

Insufficient sampling was done at this station in 1985 to obtain meaningful results. Previous data indicates that the water quality has not changed since 1979 with a moderately low degree of water clarity and moderately high densities of suspended algae. In 1980, high densities of suspended algae were observed.

We hope that sampling continues in 1986 with increased frequency.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Pine Lake in Gravenhurst (Lower 2nd station) from 1979 to 1984. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* based on 4 or 5 sample results

Insufficient sampling was done at this location in 1985 to obtain meaningful results. The past 6 years of data indicates that conditions at this station are moderately enriched to enriched with a moderately low degree of water clarity and moderate to high densities of suspended algae.

We hope that sampling is done in 1986 with increased frequency.

Pine Lake

Oakley Ward
Town of Bracebridge

District Municipality of Muskoka

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Pine Lake in 1985

Station	1 North Bay 2 Centre West 3 Southwest		1 Northeast 2 Centre East 3 South	
Date	S.D.	Chl.a	S.D.	Chl.a
1 Aug 3	3.0	3.5	3.5	3.6
2 Sept 2	3.8	1.7	3.8	1.9
3 Oct 27*	3.5	7.6	3.5	4.0

* no sampling date given

Insufficient sampling was done in 1985 to obtain reliable seasonal averages. Based on the 3 results available, the degree of water transparency was moderately low and the densities of suspended algae were moderate to high, indicative of moderately enriched conditions. In 1986, we recommend that sampling be done at 1 station in the middle of the lake at least 6 times if possible. Please be sure to enter the sampling dates for all samples on the submission forms.

Figure 1: The relationship between Secchi disc and chlorophyll a for a number of recreational lakes in the province. All data are seasonal means.

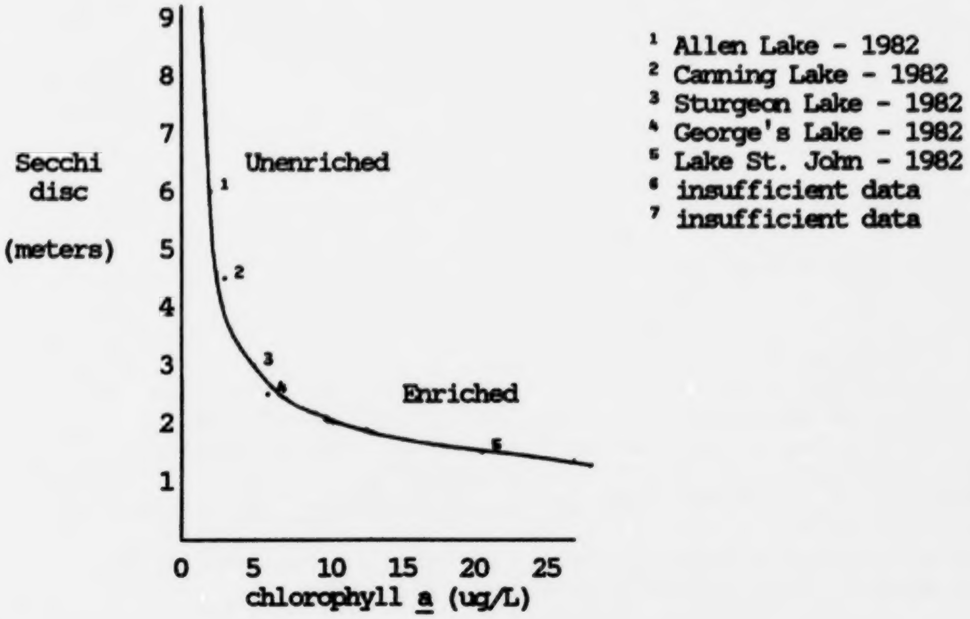
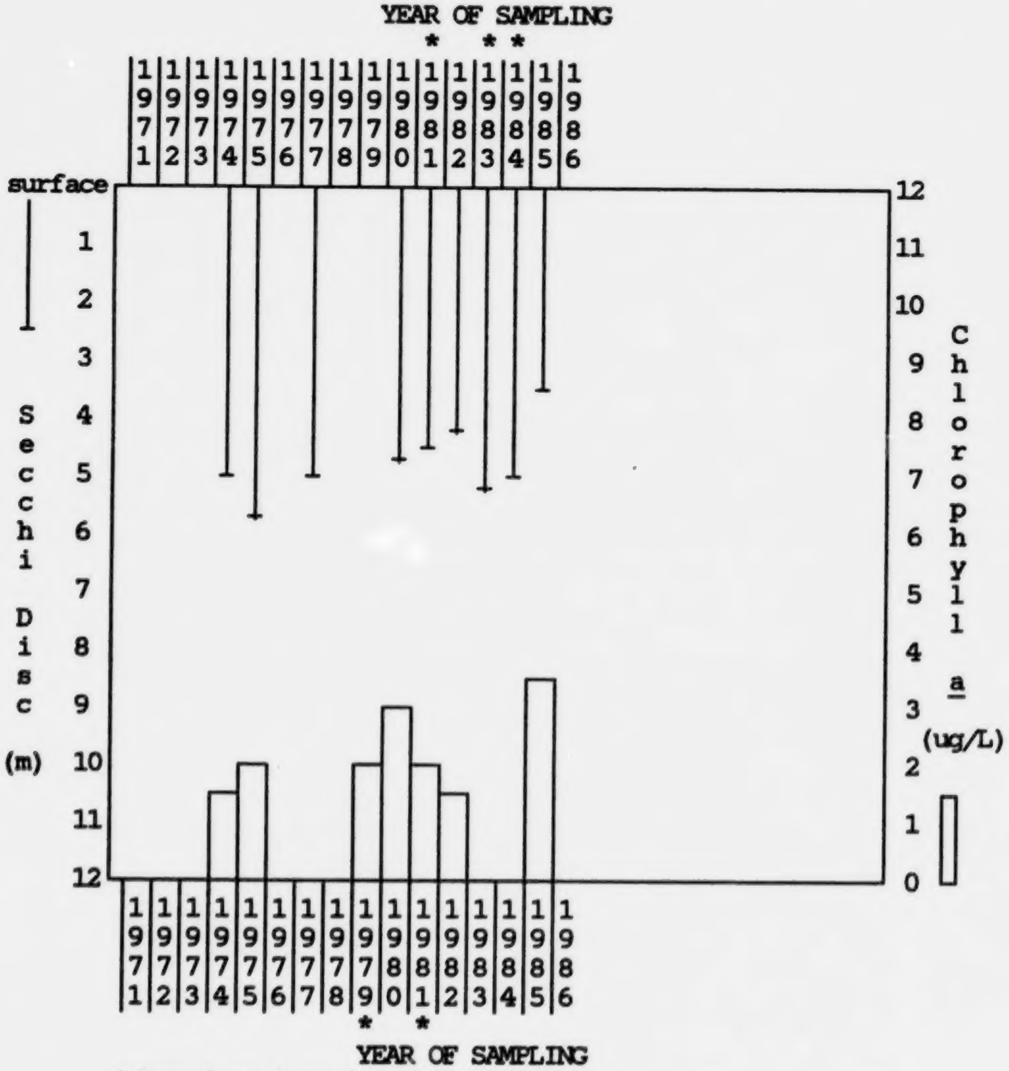


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Pine Lake in Bracebridge from 1974 to 1985. Data from 1974 to 1981 is main lake station, 1982 to 1985 are averages of several stations. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* based on 4 or 5 sample results

We have 9 years of data for Pine Lake in Bracebridge indicating that water quality is generally moderately enriched to unenriched.

The degree of water clarity has been moderately high to high except in 1985 when moderately low clarity was observed.

The densities of suspended algae have been moderately low or low for the period of record.

We recommend that 1 station be chosen for sampling and sampling be done at least 6 times to obtain more meaningful data.

Rebecca Lake

Sinclair Township
Township of Lake of Bays

District Municipality of
Muskoka

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Rebecca Lake in 1985

Station	North End		South	
Date	S.D.	Chl.a	S.D.	Chl.a
Aug 5	3.5	1.8	3.5	1.4
Aug 31	3.5	1.5	- -	- -
	-----	-----	-----	-----

Insufficient sampling was done in 1985 to obtain reliable seasonal averages. Based on the 2 results obtained, the degree of water clarity was moderately low but the densities of suspended algae were also low. If sampling is done in 1986 we recommend that 1 station be sampled in the middle of the lake at least 6 times to obtain meaningful results.

Figure 1: The relationship between Secchi disc and chlorophyll a for a number of recreational lakes in the province. All data are seasonal means.

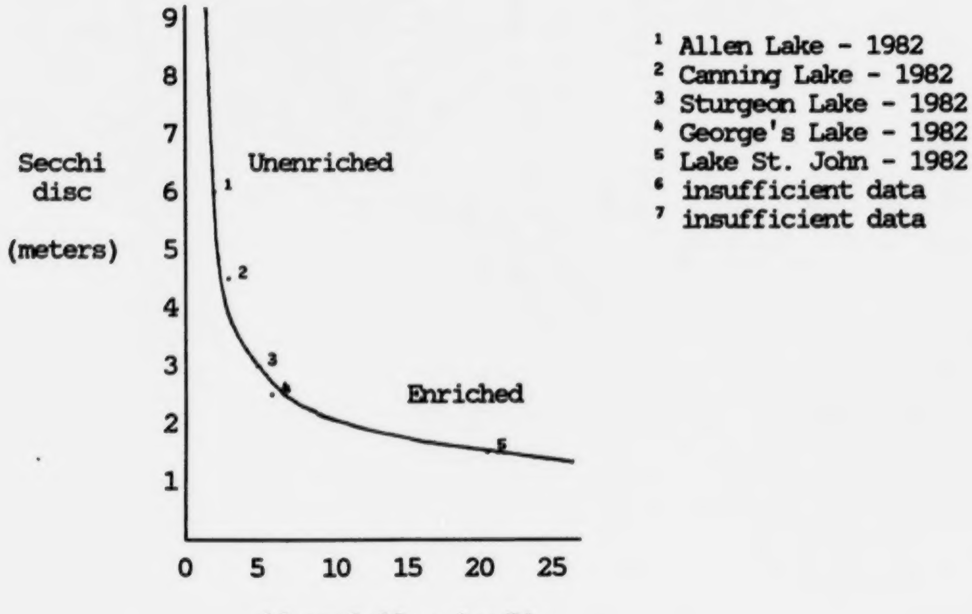
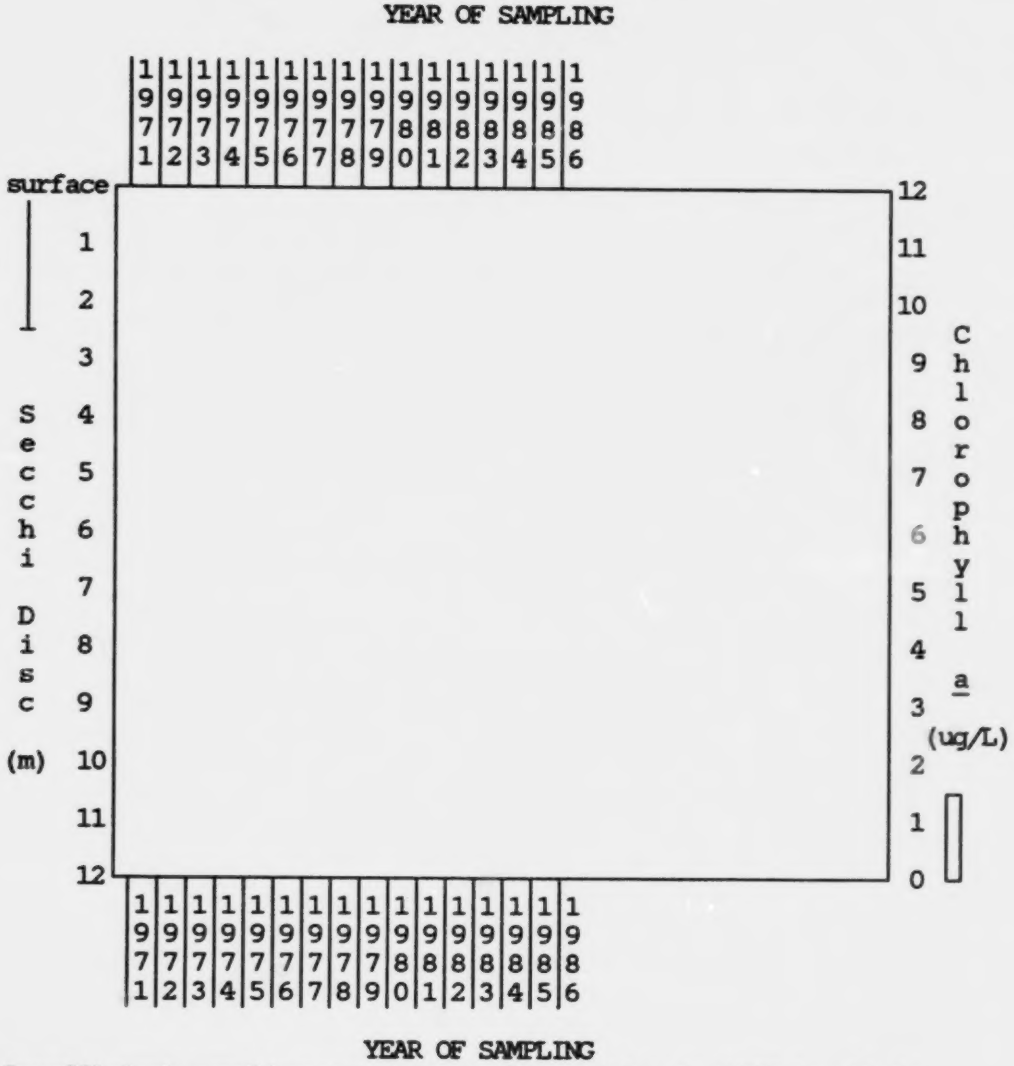
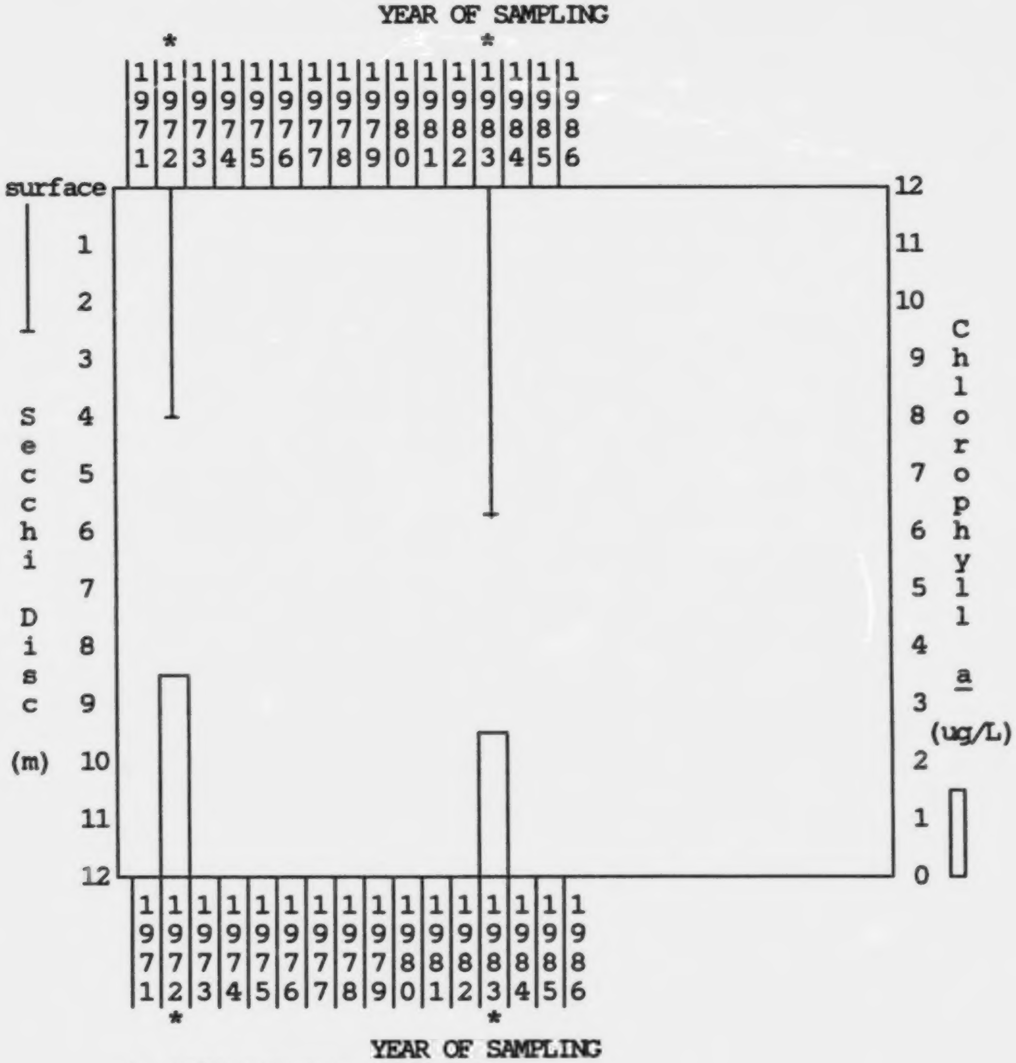


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Rebecca Lake (North end)
A minimum of 4 results was required for graphing.



Insufficient sampling was done at this station in 1985 to obtain meaningful results.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Rebecca Lake (South end) from 1972 to 1983. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* 1972 MOE data 11 results
1983 MOE data 5 results

Insufficient sampling was done at this station in 1985 to obtain meaningful results.

Sampling in 1986 should be done more frequently.

Ril Lake

Ridout Ward
Township of Lake of Bays

District Municipality of
Muskoka

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Ril Lake in 1985

Station	Centre	
Date	S.D.	Chl.a
July 31	3.0	3.8
Aug 14	2.5	6.1
Aug 28	2.8	3.6
	-----	-----

Insufficient sampling was done in 1985 to obtain reliable seasonal averages. Based on the 2 results obtained, the degree of water clarity was low and the densities of suspended algae were moderate to high.

Figure 1: The relationship between Secchi disc and chlorophyll a for a number of recreational lakes in the province. All data are seasonal means.

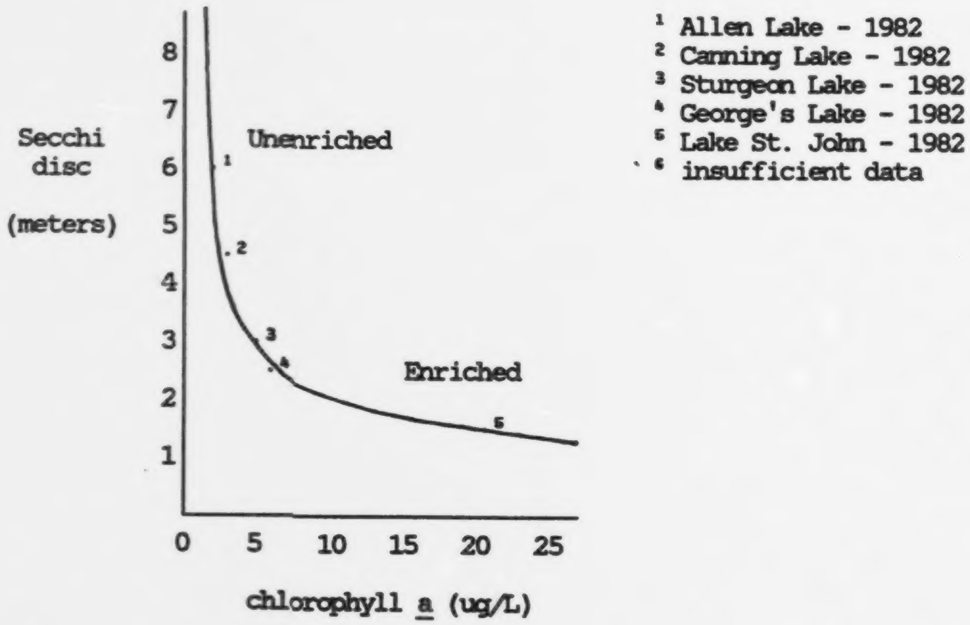
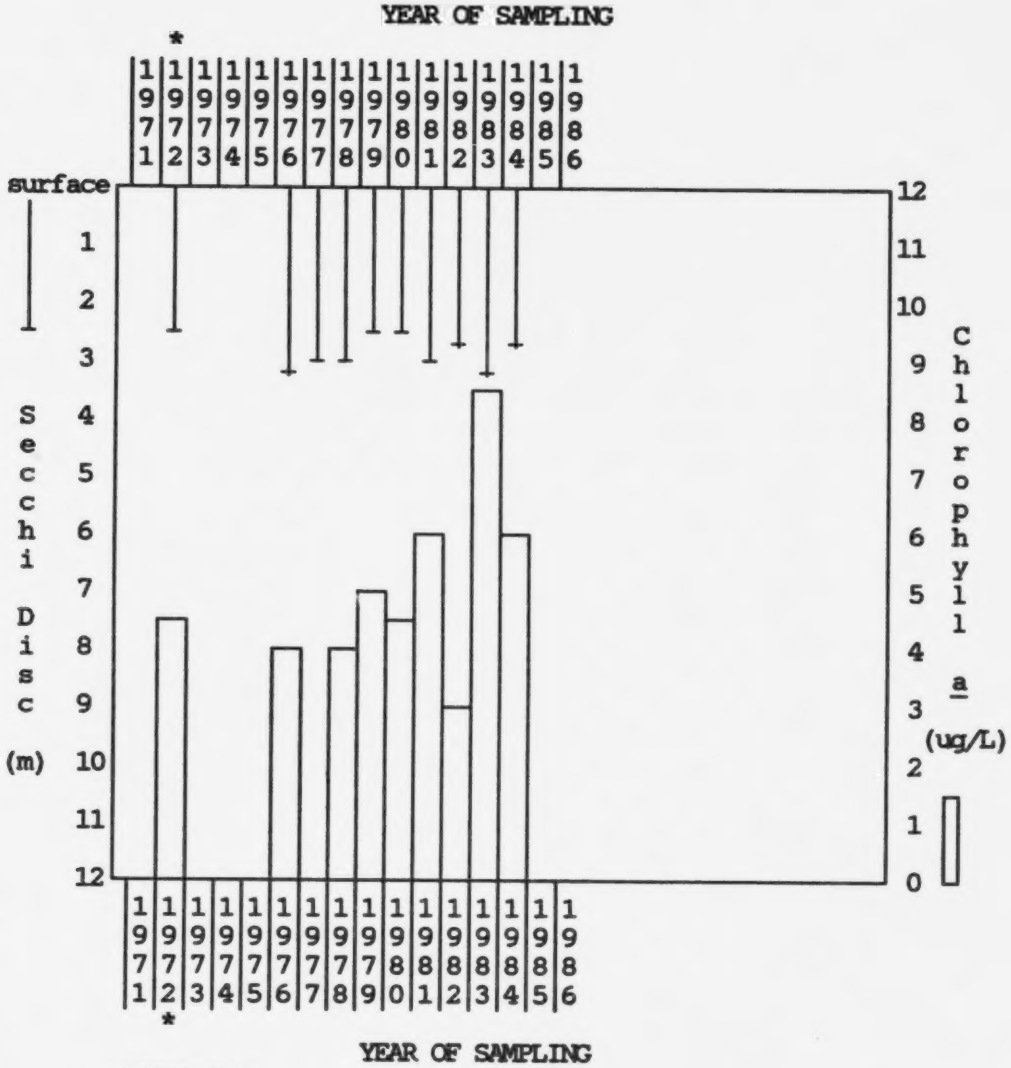


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Ril Lake from 1972 to 1984.
Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* MOE data

Insufficient sampling was done in 1985 to include the data on the graph. Past results indicate enriched conditions with a low degree of water clarity and high densities of suspended algae.

There has been no change in water quality in Ril Lake since 1971.

We hope that sampling is done in 1986 with increased frequency.

Salerno Lake

Snowdon & Glamorgan Townships

County of Haliburton

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Salerno Lake in 1985

Station	South		North	
Date	S.D.	Chl.a	S.D.	Chl.a
July 28	5.0	3.5	3.3	6.4
Aug 4 *	4.0	3.5	4.0	3.6
Aug 25	6.0	2.2	4.0	4.8
	-----	-----	-----	-----

* - no sampling date given

Insufficient sampling was done in 1985 to obtain reliable seasonal averages. Based on the 3 results obtained, the degree of water transparency was moderate in the North and higher in the South. Densities of suspended algae were moderate in the South and higher in the North.

In 1986, please increase sampling frequency if possible to 6 times during the season and be sure to record the sampling dates for all samples on the submission forms.

Figure 1: The relationship between Secchi disc and chlorophyll a for Salerno Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means.

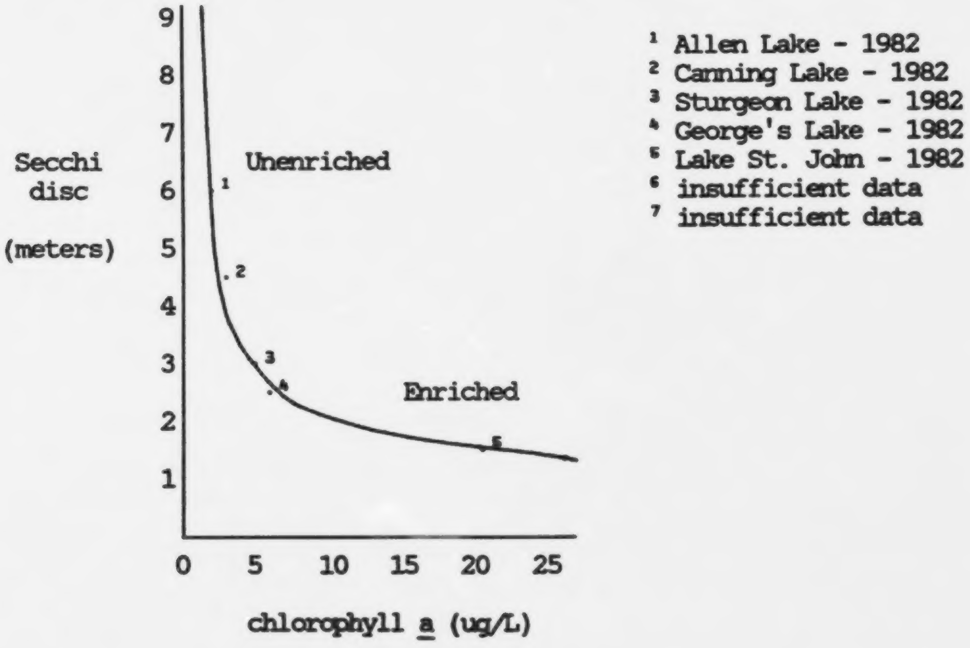
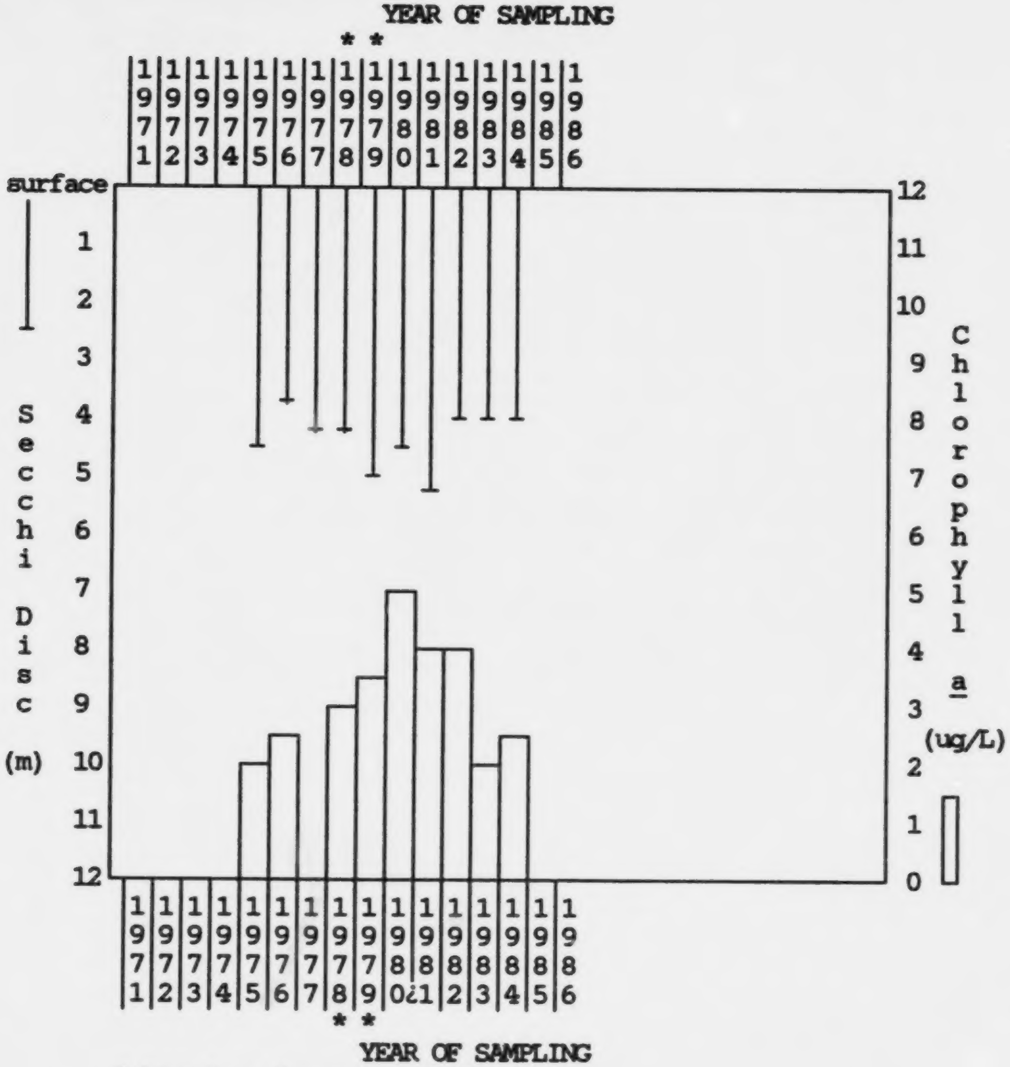


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Salerno Lake (North station) from 1975 to 1984. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* based on 4 sample results

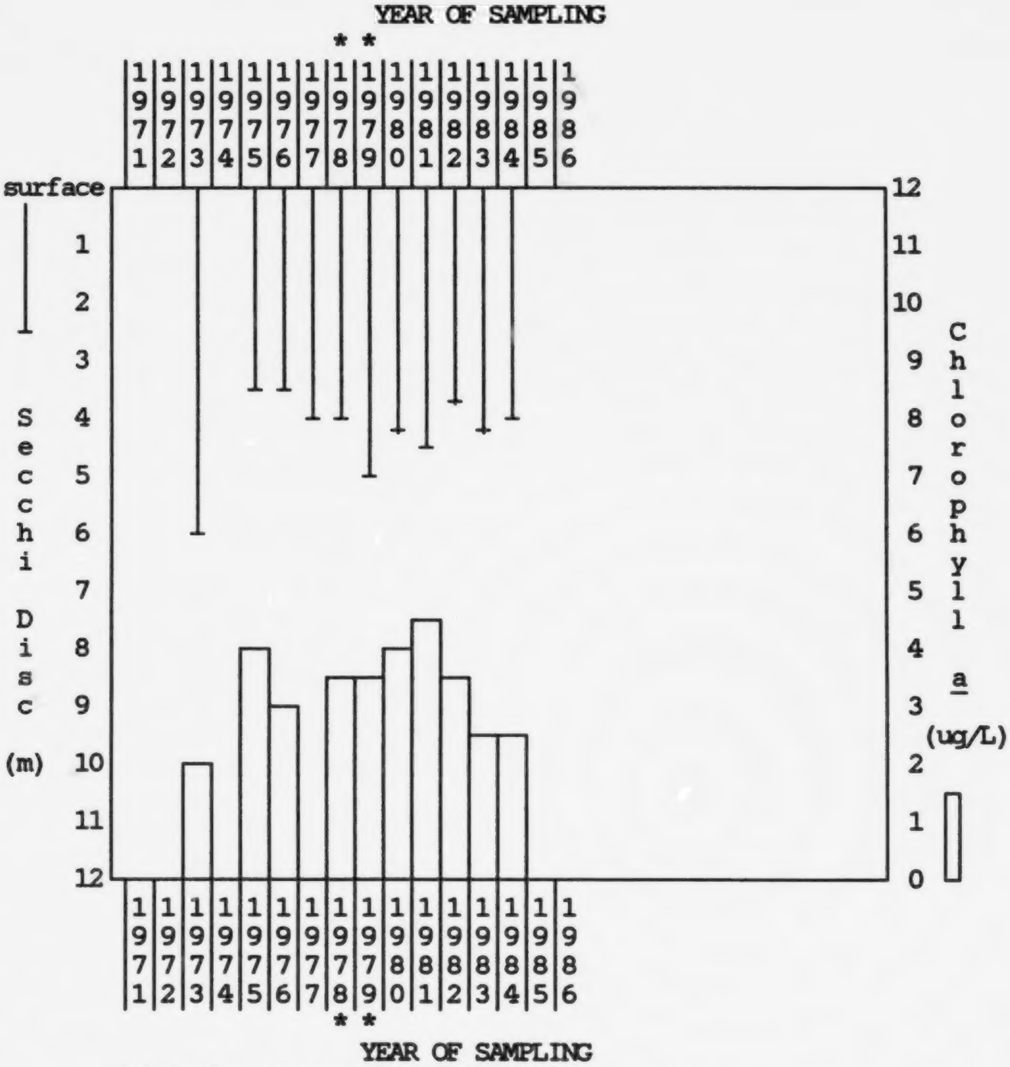
Insufficient sampling was done at this station in 1985 to obtain meaningful results.

Past results indicate moderately enriched conditions with a moderately high degree of water clarity and densities of suspended algae ranging from moderately low to high.

There has been no noticeable change in water quality since 1975.

We hope sampling is done in 1986 with increased frequency.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Salerno Lake (South station) from 1973 to 1984. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* based on 4 sample results

Insufficient sampling was done at this station in 1985 to obtain meaningful results. Past results indicate no overall change in water quality.

The degree of water clarity has been moderate and densities of suspended algae have ranged from moderately low to high, reflecting moderately enriched conditions.

We hope that sampling continues in 1986 with increased frequency.

Salmon Lake

Cavendish Township

County of Peterborough

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Salmon Lake in 1985

Station	North		South	
Date	S.D.	Chl.a	S.D.	Chl.a
Aug 11 *	7.0	1.1	6.1	0.7
Aug 25	6.1	1.4	6.9	1.6
Sept 1	6.0	1.6	6.5	1.7
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* no sampling date given

Insufficient sampling was done in 1985 to obtain reliable seasonal average information.

Based on the 3 results available, Salmon Lake had a high degree of water clarity and low densities of suspended algae.

If sampling is done in 1986, please be sure to enter the sampling dates for all samples and, if possible, increase the sampling frequency to at least six times during the season to get reliable data.

Figure 1: The relationship between Secchi disc and chlorophyll a for a number of recreational lakes in the province. All data are seasonal means.

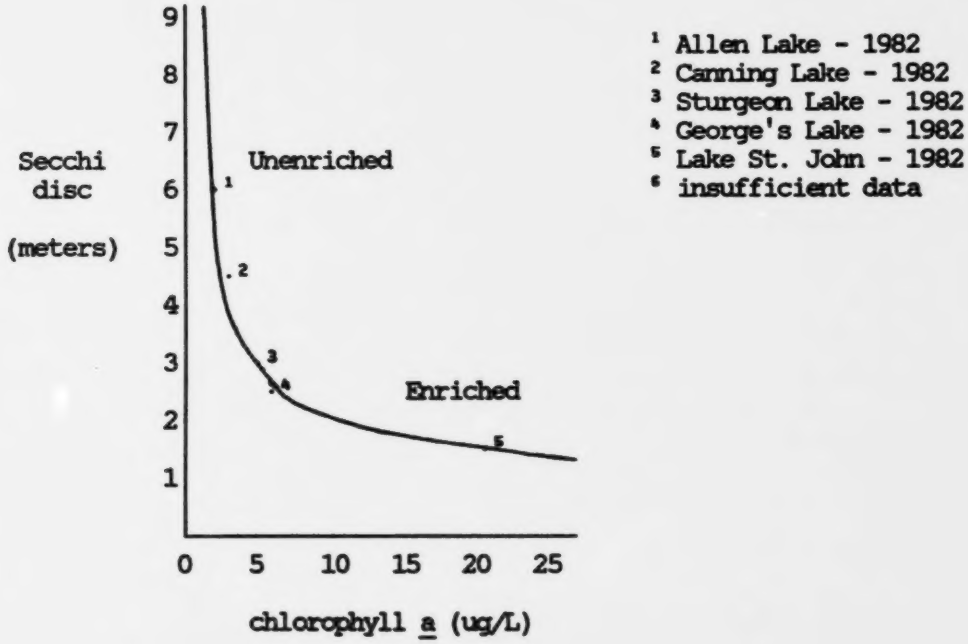
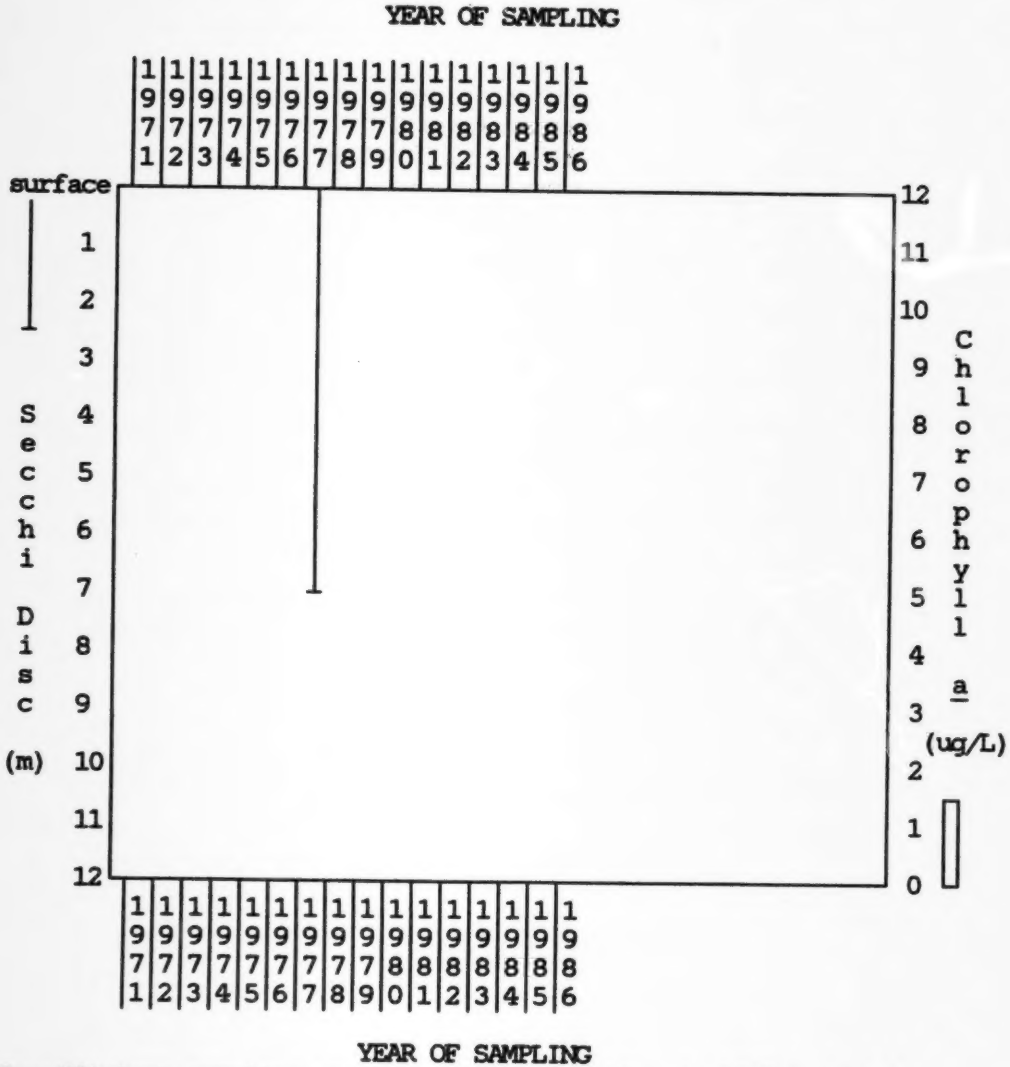
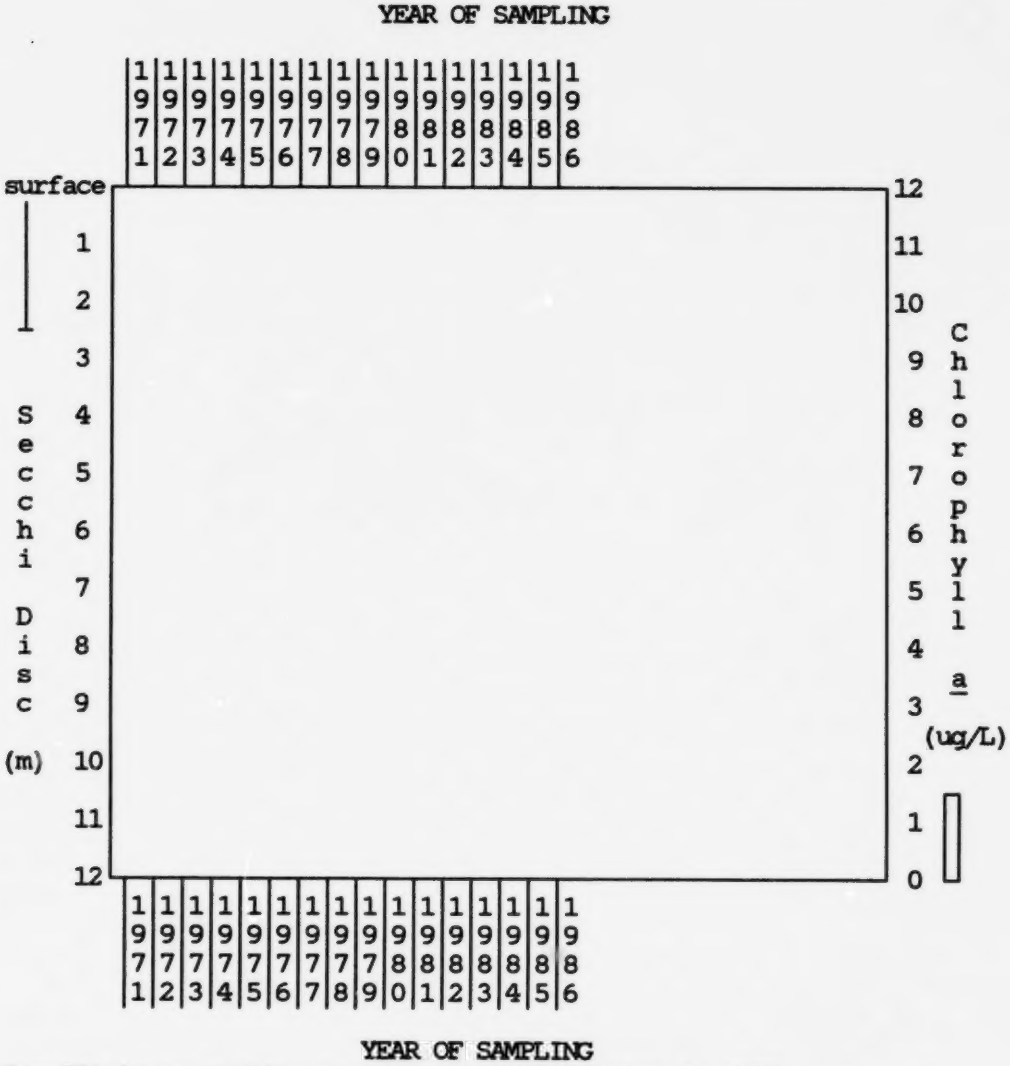


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Salmon Lake (North station) in 1977. Seasonal mean data (more than 6 sampling dates) only. A minimum of 4 results was required for graphing.



Insufficient sampling was done at this station in 1985 to obtain meaningful results. We hope that sampling is done in 1986 with increased frequency.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Salmon Lake (South station)
Seasonal mean data (more than 6 sampling dates) only.
A minimum of 4 results was required for graphing.



Insufficient sampling was done at this station in 1985.
We hope that sampling is done in 1986 with increased frequency.

Shadow Lake

Somerville Township

Victoria County

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Shadow Lake in 1985

Station	Main	
Date	S.D.	Chl.a
June 9	4.0	1.4
July 28	4.8	1.2
Aug 5	5.5	1.1
Aug 11	4.8	1.2
Aug 18	4.5	1.9
Aug 25	4.8	2.3
Sept 2	4.3	2.1
Oct 14	4.5	1.7
	4.7	1.6

Once again, an excellent sampling program was done on Shadow Lake with sampling on 8 occasions from June 9 to Oct 14. Secchi disc readings ranged from 4.0 to 5.5 m and averaged 4.7 m indicating a moderately high degree of water clarity. Chlorophyll a concentrations ranged from 1.1 to 2.3 ug/L and averaged 1.6 ug/L indicating that low densities of algae were present. Based on 1985 results, Shadow Lake would be considered unenriched with very good water quality.

Figure 1: The relationship between Secchi disc and chlorophyll a for Shadow Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means.

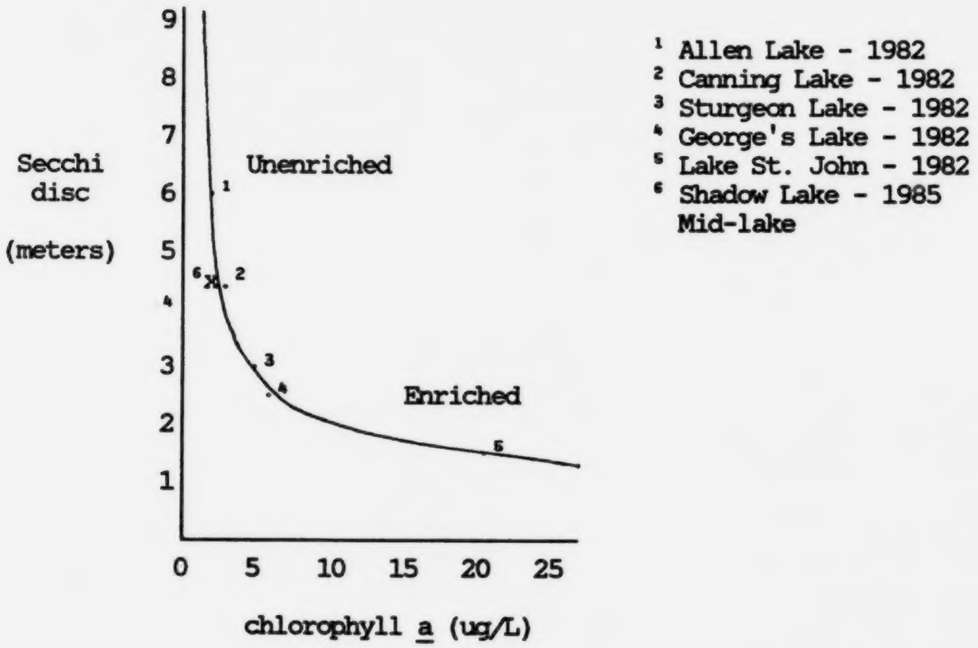
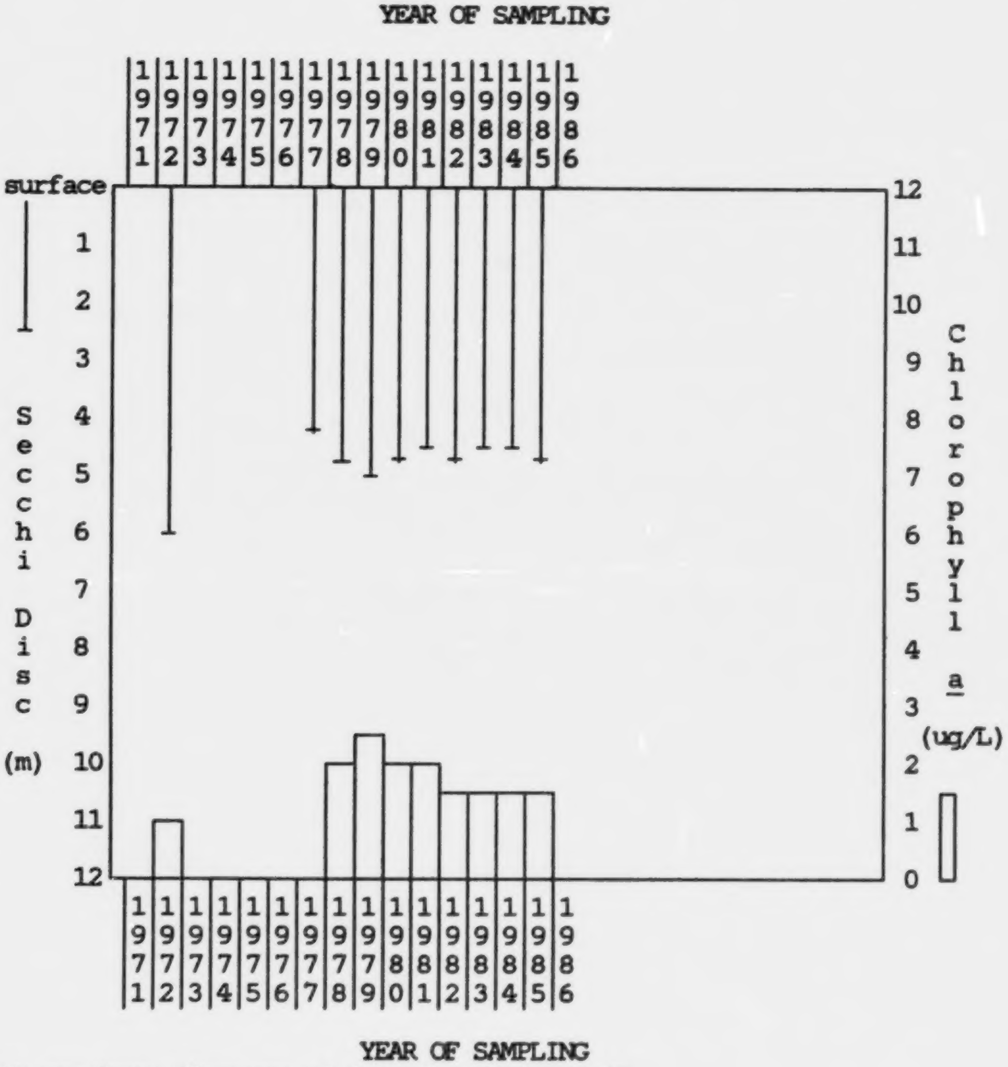


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Shadow Lake from 1972 to 1985. Seasonal mean data (more than 6 sampling dates) only.



We now have 10 years of data for Shadow Lake.
The degree of water clarity has been moderately high except in 1972 when clarity was high.
Densities of suspended algae have been generally low for the period of record.
There has been no change in water quality in Shadow Lake since 1972.
We hope that sampling is continued on Shadow Lake in 1986.

Silver Lake

Muskoka & Morrison Ward
Town of Gravenhurst

District Municipality of
Muskoka

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Silver Lake in 1985.

Station	Lower Silver	
Date	S.D.	Chl.a
May 26	2.5	1.1
June 18	2.0	7.7
July 1	3.2	2.9
Aug 15	2.75	2.8
	2.6	3.6

In 1985, sampling was done on 4 occasions in Silver Lake.
The degree of water clarity was low with an average Secchi disc reading of 2.6 m.
Densities of suspended algae were moderately high with an average chlorophyll a concentration of 3.6 ug/L. High densities of suspended algae occurred on June 18.
Based on the 1985 results, Silver Lake would be considered moderately enriched.

Figure 1: The relationship between Secchi disc and chlorophyll a for Silver Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means.

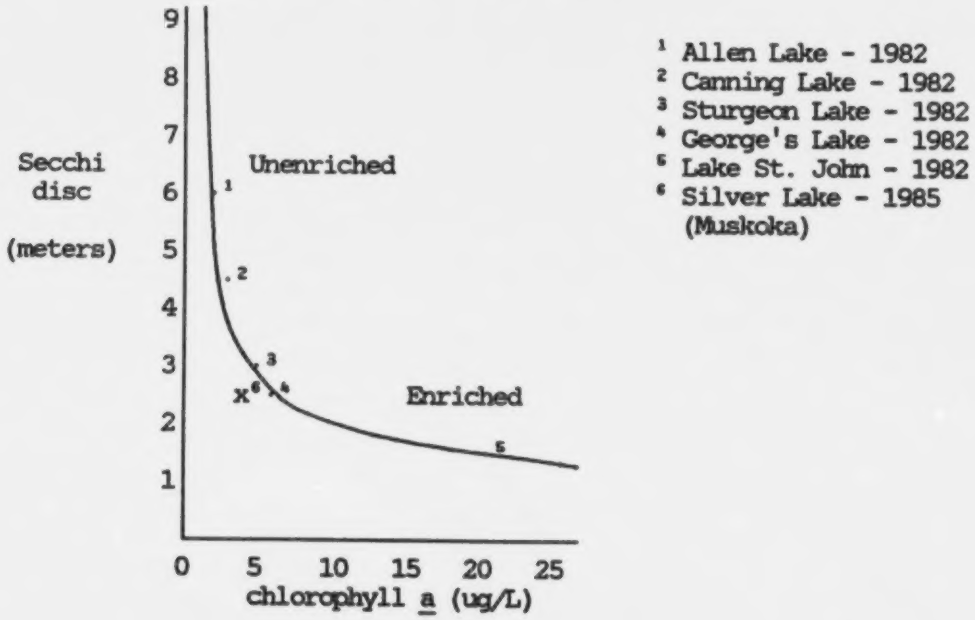
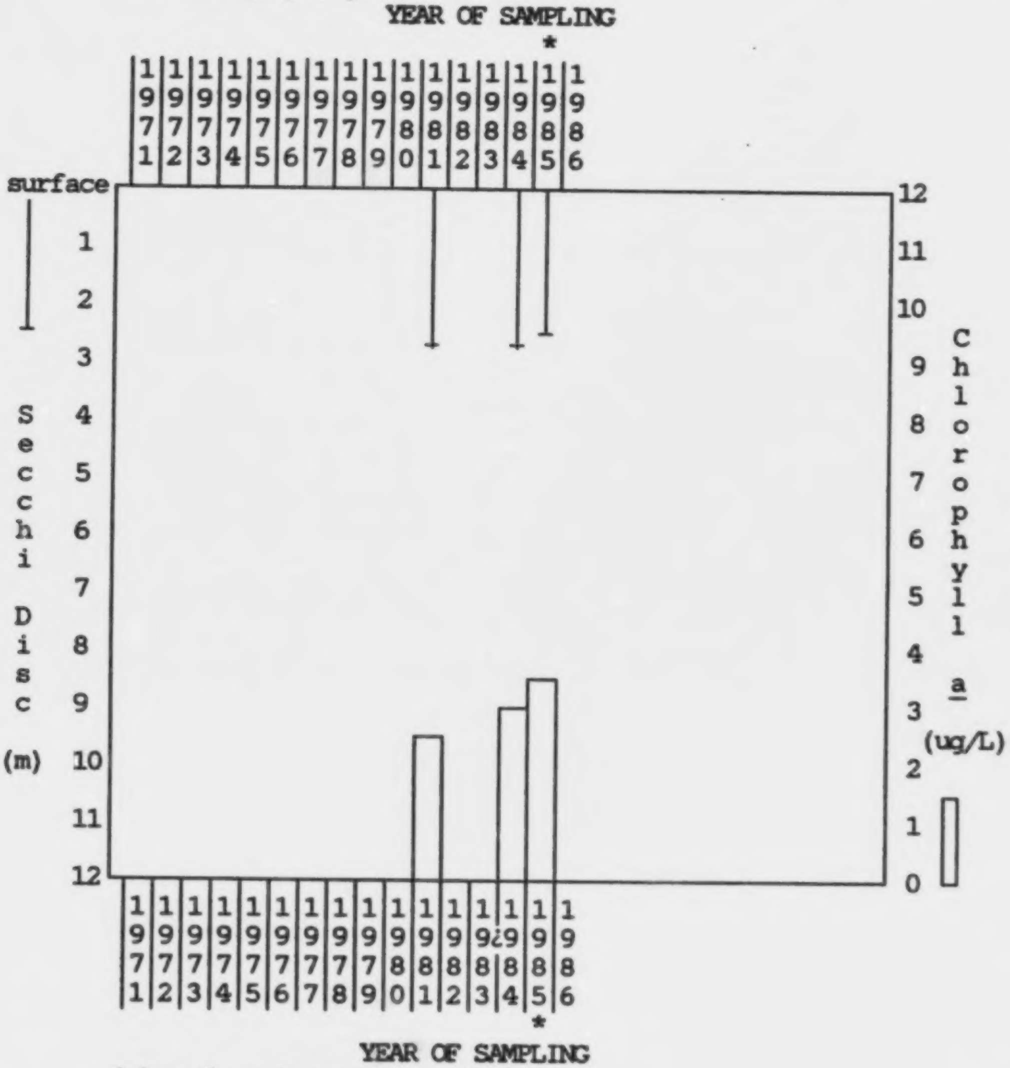


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Silver Lake from 1981 to 1985. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* based on 4 sample results

The available data for Silver Lake indicates that the degree of water clarity has been consistently low for the period of record and the densities of suspended algae have been moderately low.
There has been no change in water quality since 1981.
We hope that you continue to sample in 1986.

Six Mile Lake

Baxter Ward
Township of Georgian Bay

District Municipality of
Muskoka

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Six Mile Lake in 1985

Station	North (Crooked Bay)		South (Lost Channel)	
Date	S.D.	Chl.a	S.D.	Chl.a
June 9	4.5	3.4	4.0	2.2
Aug 5	5.5	1.3	4.5	1.2
Aug 25	5.0	1.8	4.5	2.2
Sept 8	5.5	2.0	3.5	1.4
Sept 22 *	5.0	1.2	4.0	1.5
	-----	-----	-----	-----

* - sampling date not given

In 1985, Six Mile Lake was sampled on 5 occasions.

The degree of water transparency was high in Crooked Bay with an average Secchi disc reading of 5.3 m. In Lost Channel the degree of water clarity was slightly lower with an average Secchi disc reading of 4.1 m. This does not appear to be due to suspended algae. Densities of suspended algae were low at both stations with an average chlorophyll a concentration of 1.7 ug/L in Crooked Bay and 1.5 ug/L in Lost Channel.

Based on these results, Six Mile Lake would be considered unenriched, with good water quality.

In 1986, please be sure to record the sampling date on the submission forms for all samples.

Figure 1: The relationship between Secchi disc and chlorophyll a for Six Mile Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means.

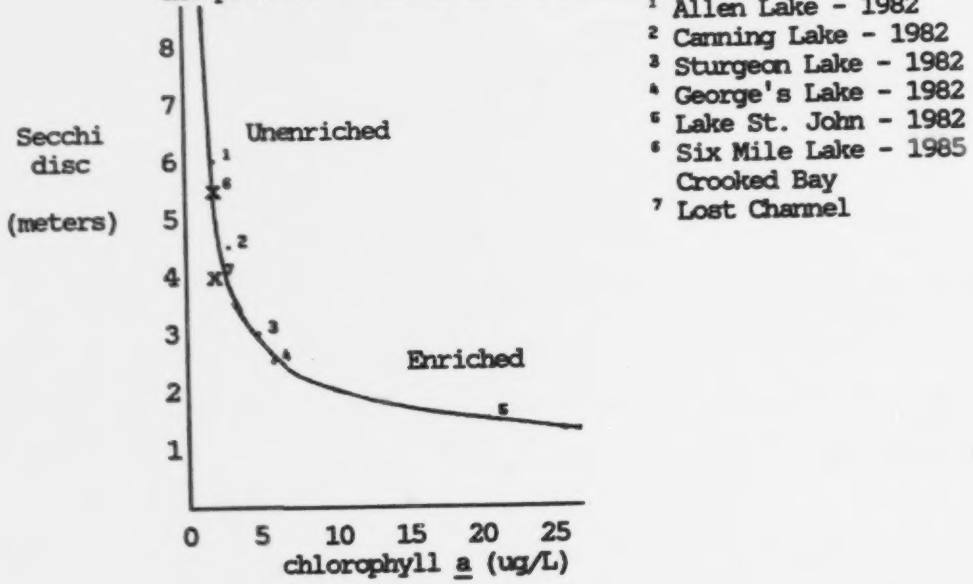
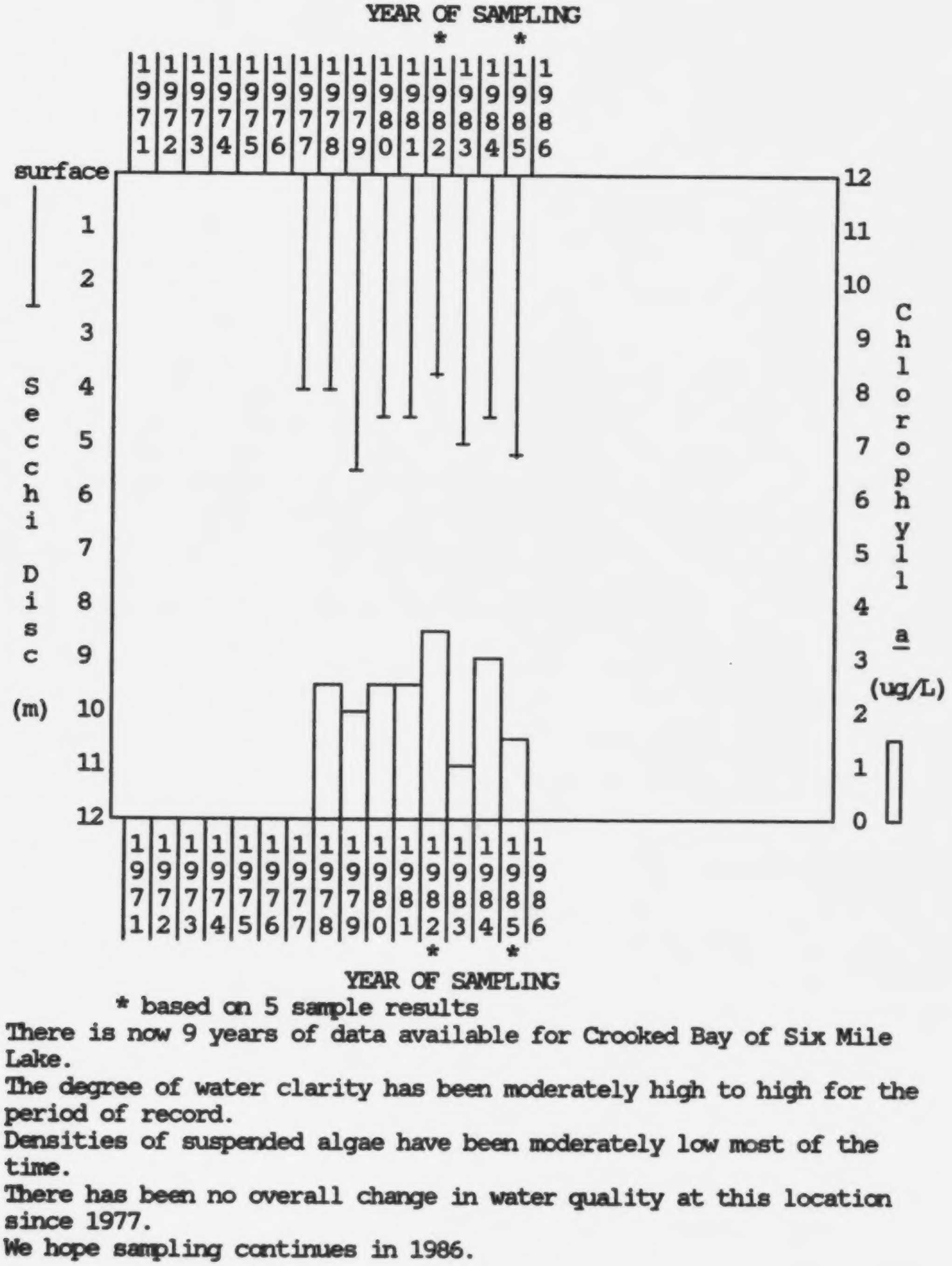


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Six Mile Lake (Crooked Bay) from 1977 to 1985. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* based on 5 sample results

There is now 9 years of data available for Crooked Bay of Six Mile Lake.

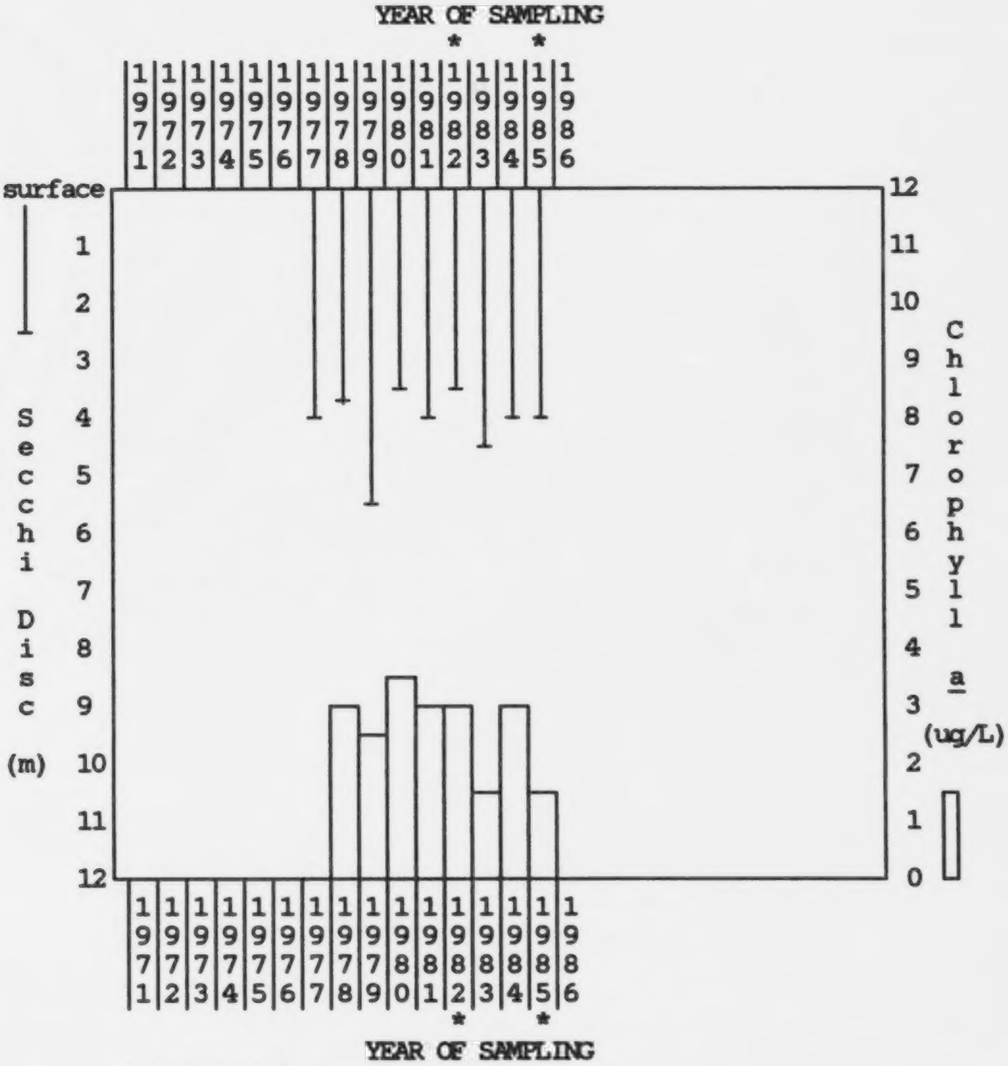
The degree of water clarity has been moderately high to high for the period of record.

Densities of suspended algae have been moderately low most of the time.

There has been no overall change in water quality at this location since 1977.

We hope sampling continues in 1986.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Six Mile Lake (Lost Channel) from 1977 to 1985 Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* based on 5 sample results

The 9 years of data for Lost Channel indicate that water quality has not changed significantly.

The degree of water clarity has been moderate except in 1979 when clarity was high.

Densities of suspended algae have been moderate except in 1983 and 1985 when densities were low.

We hope you continue in the program in 1986.

Skeleton Lake

Cardwell & Watt Wards
Twp. of Muskoka Lakes

District Municipality of Muskoka

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Skeleton Lake in 1985

Station	Middle North Shore	
Date	S.D.	Chl.a
Aug 4 *	11.0	1.3
Aug 11	9.0	1.5
Aug 25 *	9.0	1.6
Sept 8	8.5	1.2
	9.4	1.4

* sampling date not given

Skeleton Lake was sampled on 4 occasions from Aug.4 to Sept.8 in 1985. Based on the 4 results available, the degree of water transparency was very high and the densities of suspended algae were low.
Skeleton Lake had excellent water quality in 1985 characteristic of an unenriched lake.
In 1986, please be sure to enter the sampling date for all samples on the submission form.

Figure 1: The relationship between Secchi disc and chlorophyll a for Skeleton Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means except Skeleton Lake.

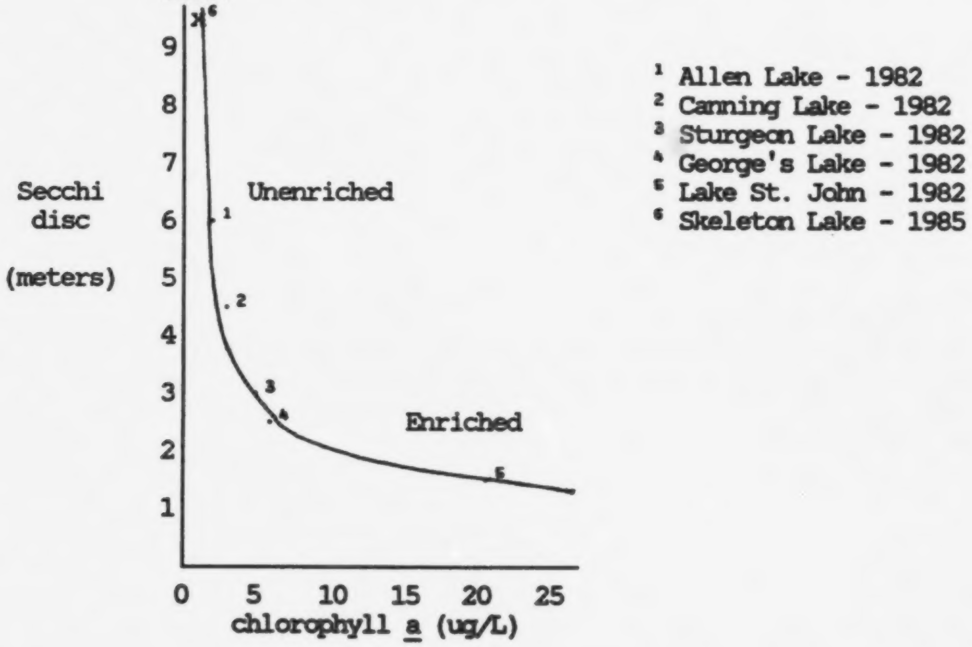
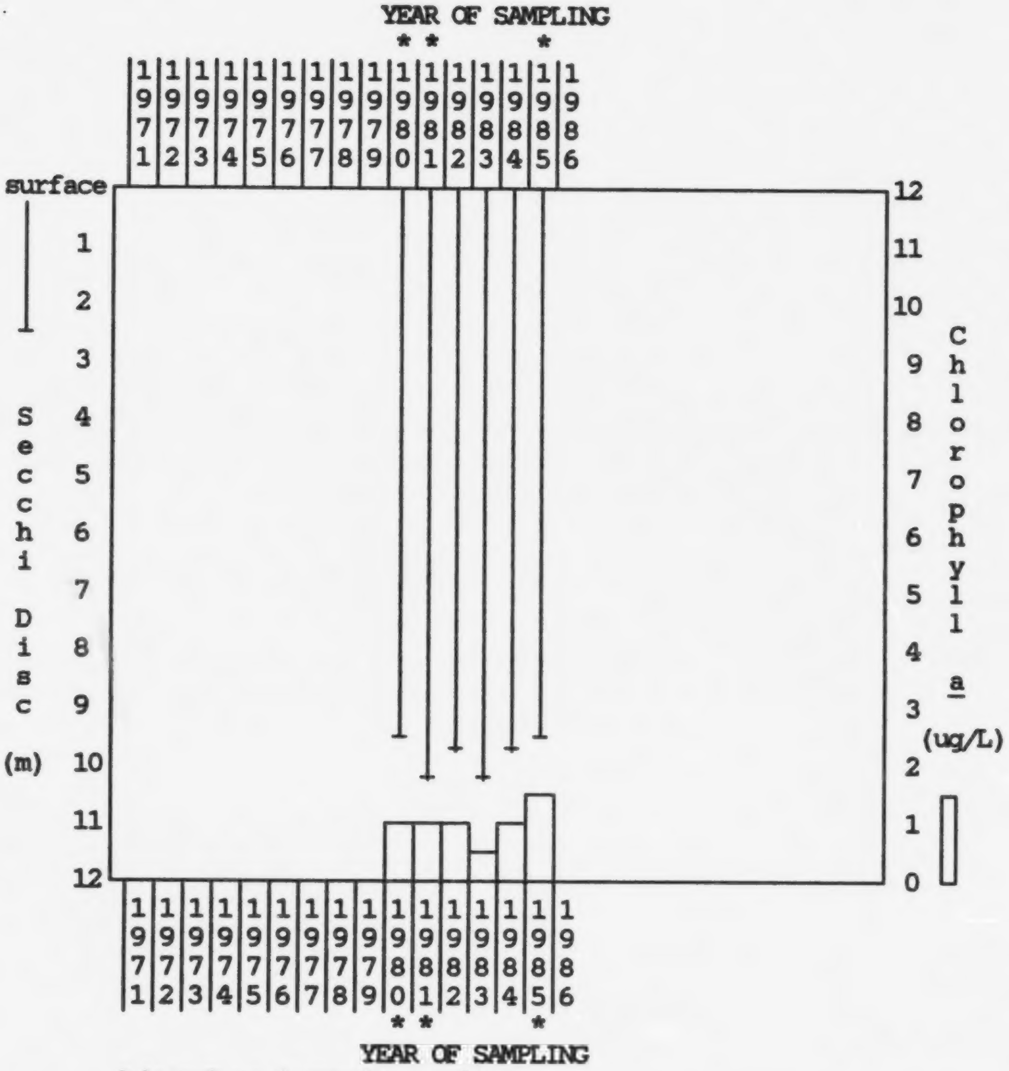


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Skeleton Lake from 1980 to 1985. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* based on 4 sample results

Water quality in Skeleton Lake continues to be excellent with an extremely high degree of water clarity and low densities of suspended algae.

We hope that you continue sampling in 1986.

Soyers Lake

Minden Township

County of Haliburton

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Soyers Lake in 1985

Station	1	
Date	S.D.	Chl.a
July 21	4.4	1.3
July 28	4.6	2.6
Aug 5	4.1	2.7
Aug 8	4.4	2.7
Aug 25	4.7	3.4
Sept 2	4.1	3.5
	4.4	2.7

An excellent sampling program was done on Soyers Lake in 1985 with sampling on 6 occasions.

The degree of water transparency was moderately high with Secchi disc readings ranging from 4.1 to 4.7 m and averaging 4.4 m.

Densities of suspended algae were moderately low with chlorophyll a concentrations ranging from 1.3 to 3.5 ug/L and averaging 2.7 ug/L.

Based on the 1985 results, Soyers Lake would be considered moderately enriched with a moderately high degree of water transparency and moderately low densities of suspended algae.

We will be sending you a new rope marked in metres for use in 1986.

Figure 1: The relationship between Secchi disc and chlorophyll a for Soyers Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means.

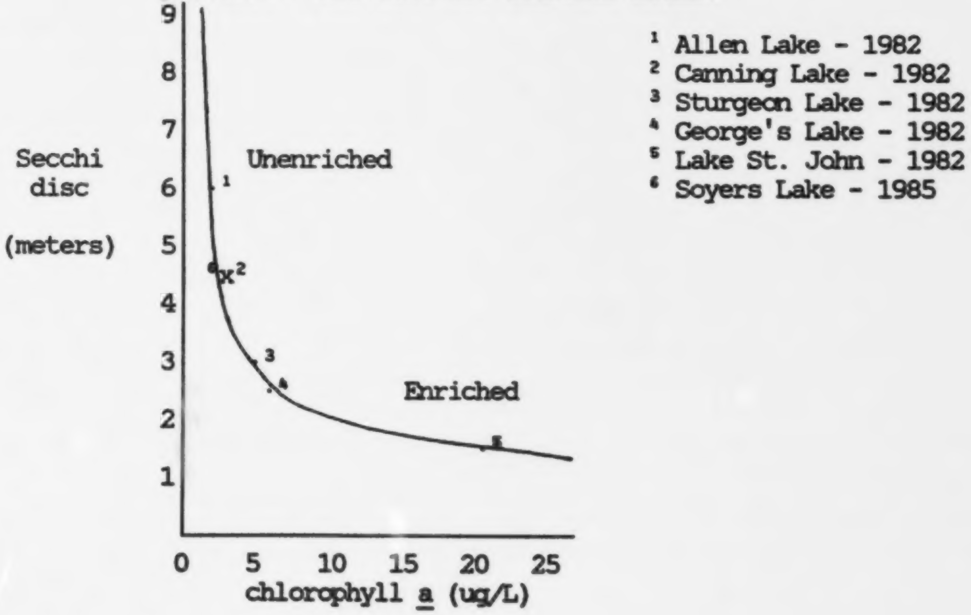
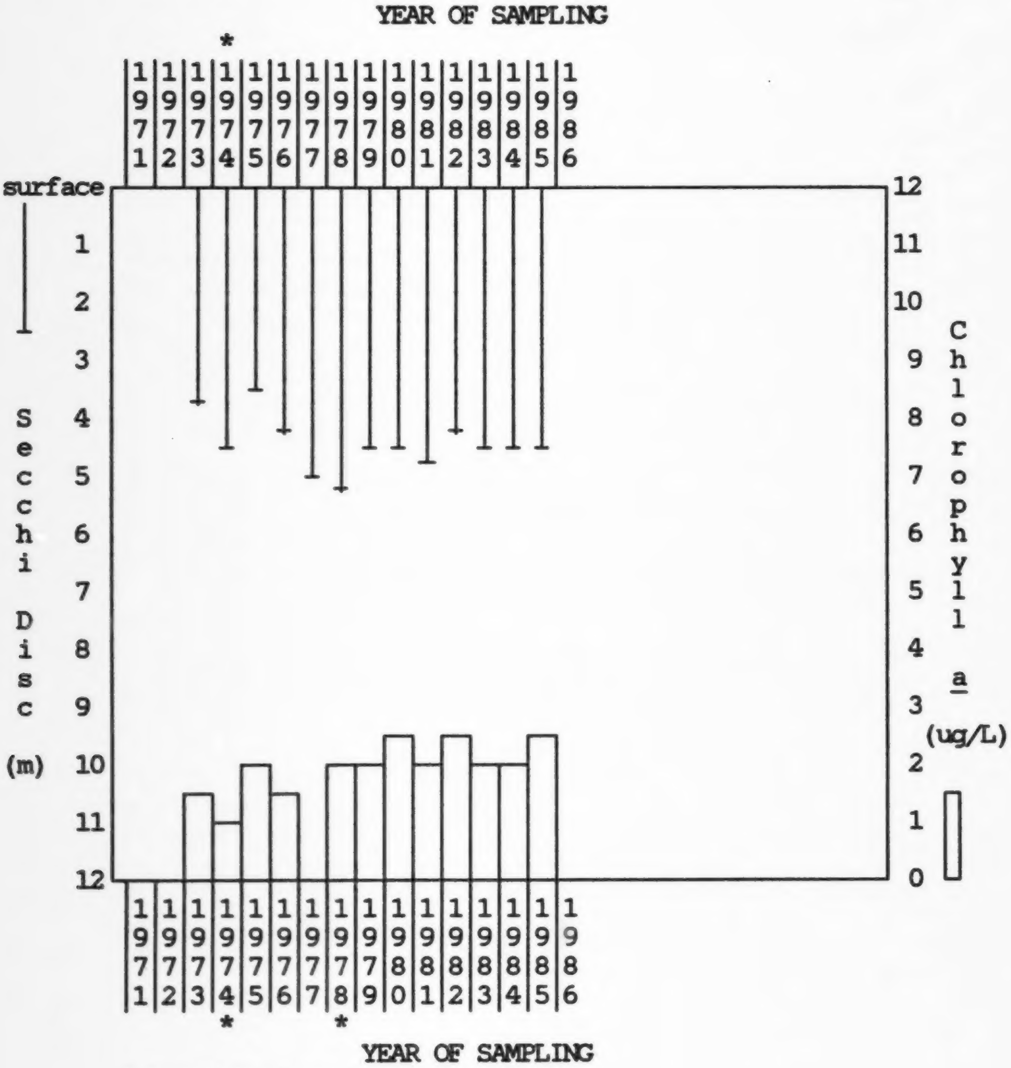


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Soyers Lake from 1973 to 1985.
Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* based on 4 or 5 sample results

An excellent sampling program has been done on Soyers Lake with 13 years of data.
The degree of water clarity has been moderately high for the period of record with Secchi disc readings ranging from 3.5 to 5.5 m.
Densities of suspended algae have been moderately low with average chlorophyll a concentrations ranging from 1 to 2.5 ug/L.
We hope you continue your excellent participation in Self Help in 1986.

Spar Lake

Lutterworth Township

County of Haliburton

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Spar Lake in 1985.

Station	Main	
Date	S.D.	Chl.a
July 28	4.5	1.6
Aug 11	6.5	1.6
Sept 2 *	6.2	1.2
Sept 15 *	6.5	L 0.7
Sept 28	6.0	1.1
	5.9	L 1.2

* no sampling date given
L less than

In 1985, sampling was done on 5 occasions on Spar Lake.
The degree of water clarity was high with Secchi disc readings ranging from 4.5 m to 6.5 m and averaging 5.9 m.
Densities of suspended algae were low, with chlorophyll a concentrations ranging from less than 0.7 to 1.6 ug/L and averaging less than 1.2 ug/L.
Based on the 1985 results, Spar Lake would be considered unenriched with excellent water quality, typical of an unenriched lake.
In 1986, please be sure to enter the sampling date for all samples on the submission forms.

Figure 1: The relationship between Secchi disc and chlorophyll a for Spar Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means.

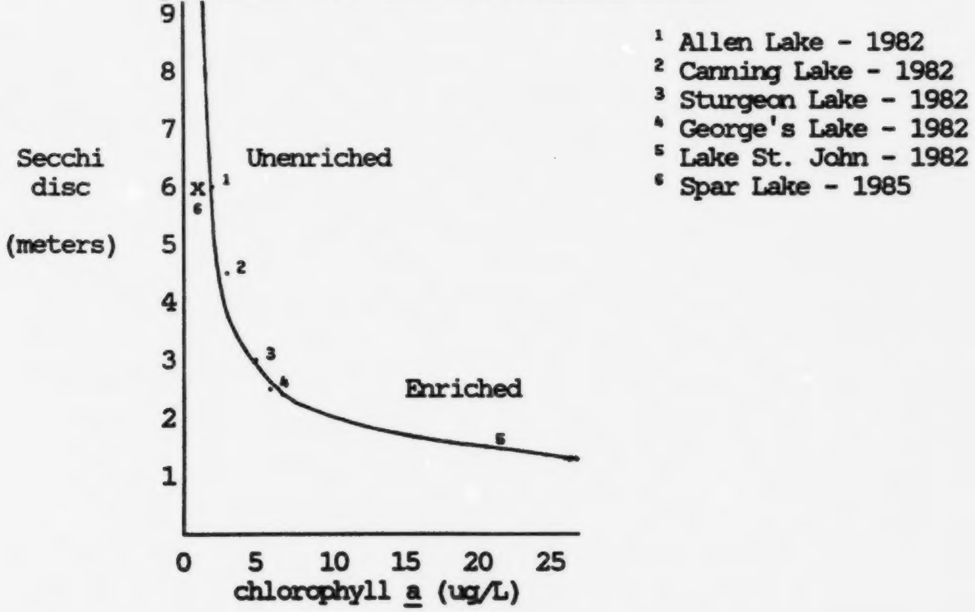
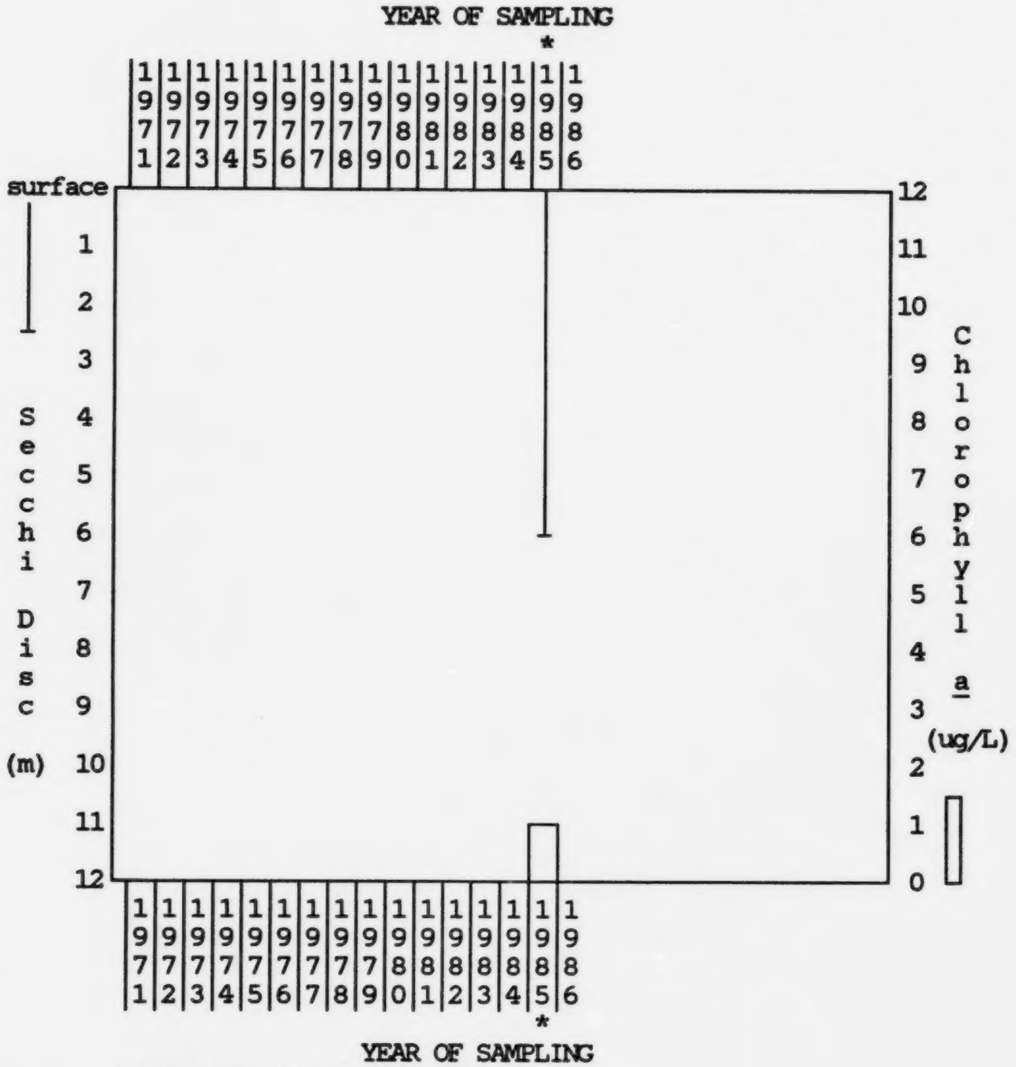


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Spar Lake in 1985.
A minimum of 4 results was required for graphing.



* based on 5 sample results

We hope sampling continues in 1986 to establish a long-term record of water quality for Spar Lake.

Sparrow Lake

Morrison Ward
Town of Gravenhurst

District Municipality of
Muskoka

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Sparrow Lake in 1985

Station	North End		Deep Bay	
Date	S.D.	Chl.a	S.D.	Chl.a
Aug 4 *	4.2	1.2	3.8	1.7
Aug 11	3.9	1.8	4.8	15.0
Aug 25 *	3.1	3.1	4.6	3.0
	-----	-----	-----	-----

* no sampling date given

Insufficient sampling was done on Sparrow Lake in 1985 to obtain reliable seasonal averages. Based on the 3 results obtained, the degree of water transparency was moderately low at the North End and slightly higher in Deep Bay. Densities of suspended algae were moderately low at the North End and high densities of algae occurred in Deep Bay on Aug.11.

In 1986, please be sure to enter the sampling date for all samples on the submission forms and, if possible, sample 6 times during the season.

Figure 1: The relationship between Secchi disc and chlorophyll a for a number of recreational lakes in the province. All data are seasonal means.

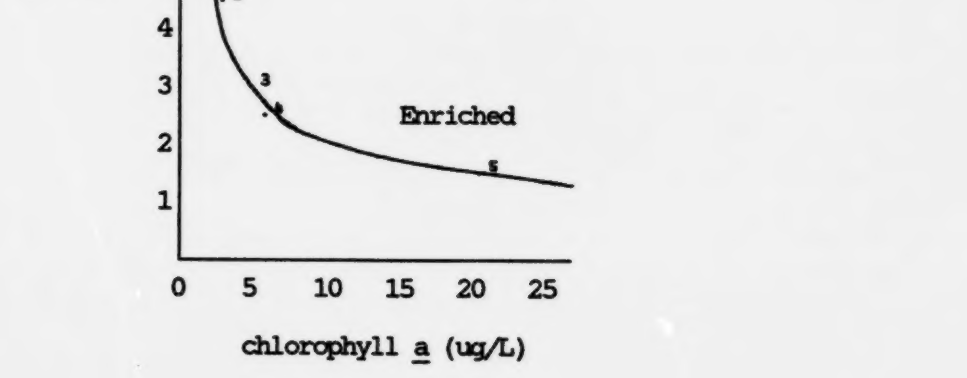
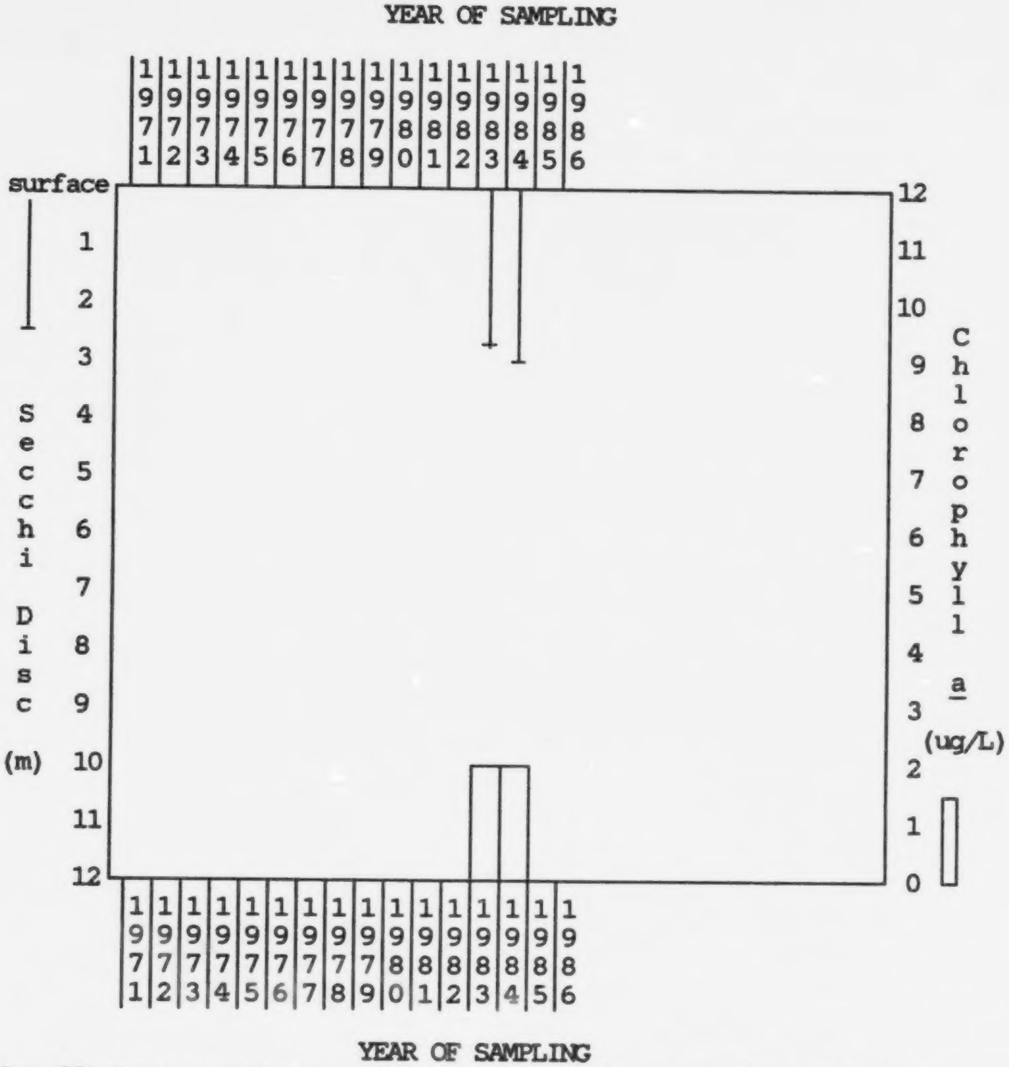
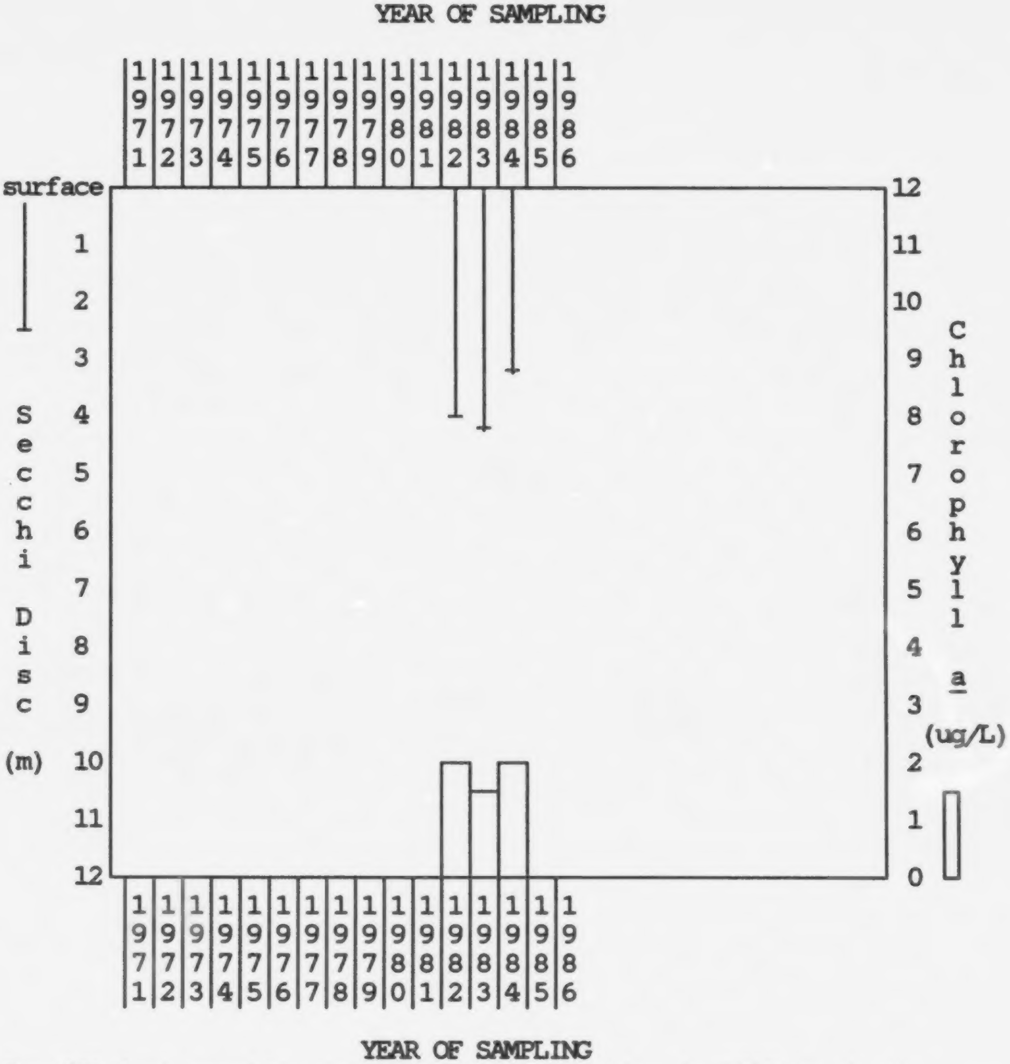


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Sparrow Lake (North End) from 1983 to 1984. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



Insufficient sampling was done at this station in 1985 to obtain meaningful results. Past results indicate moderately enriched conditions with a moderately low degree of water clarity and moderately low densities of suspended algae.
We hope sampling is done in 1986 with increased frequency.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Sparrow Lake (Deep Bay) from 1982 to 1984. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



Insufficient sampling was done at this station in 1985 to obtain meaningful results. Past results indicate moderately enriched conditions with a moderate degree of water clarity and moderate to low densities of suspended algae.
We hope that sampling is done in 1986 with increased frequency.

Sturgeon Lake

Fenelon Township

Victoria County

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Sturgeon Lake in 1985

Station	Off Sturgeon Pt. (Foot 2nd St.)	
Date	S.D.	Chl.a
July 29	2.6	5.5
Aug 6	3.0	3.3
Aug 11	3.0	5.2
Sept 15	3.0	6.5
Sept 22	2.75	6.8
Sept 30	2.25	7.7
Oct 6	1.6	14.8
Oct 14	2.5	L A
	2.6	7.1

An excellent sampling program was done on Sturgeon Lake in 1985 with sampling on 8 occasions from July 29 to Oct 14. Secchi disc readings ranged from 1.6 to 3.0 m and averaged 2.6 m indicating a low degree of water clarity. Chlorophyll a concentrations ranged from 3.3 to 14.8 ug/L and averaged 7.1 ug/L indicating high densities of algae. Based on the 1985 results, Sturgeon Lake would be classified as an enriched lake which has periodic algae blooms.

Figure 1: The relationship between Secchi disc and chlorophyll a for Sturgeon Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means.

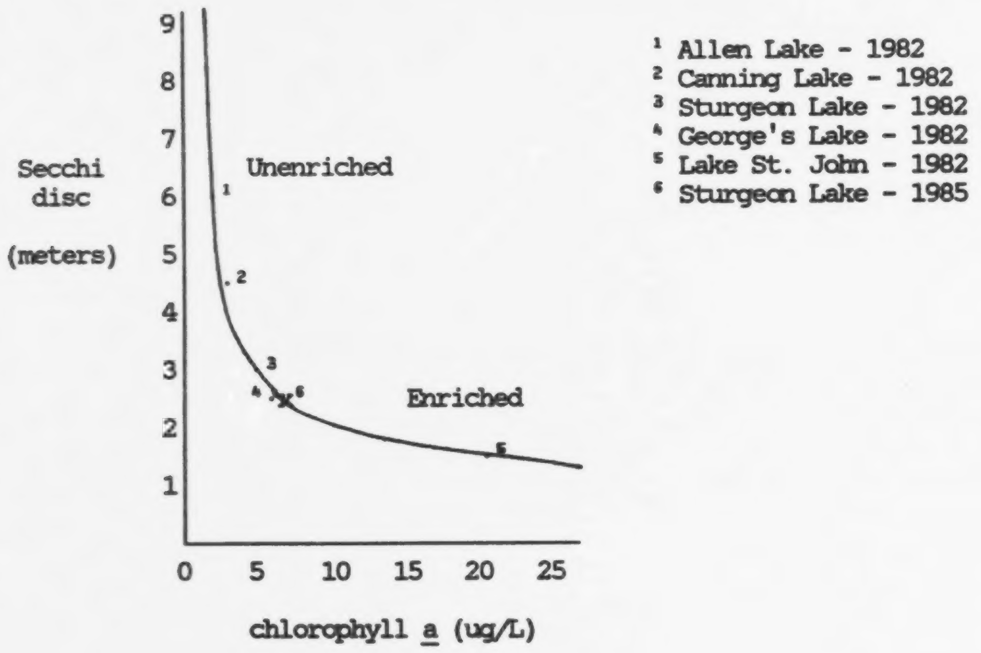
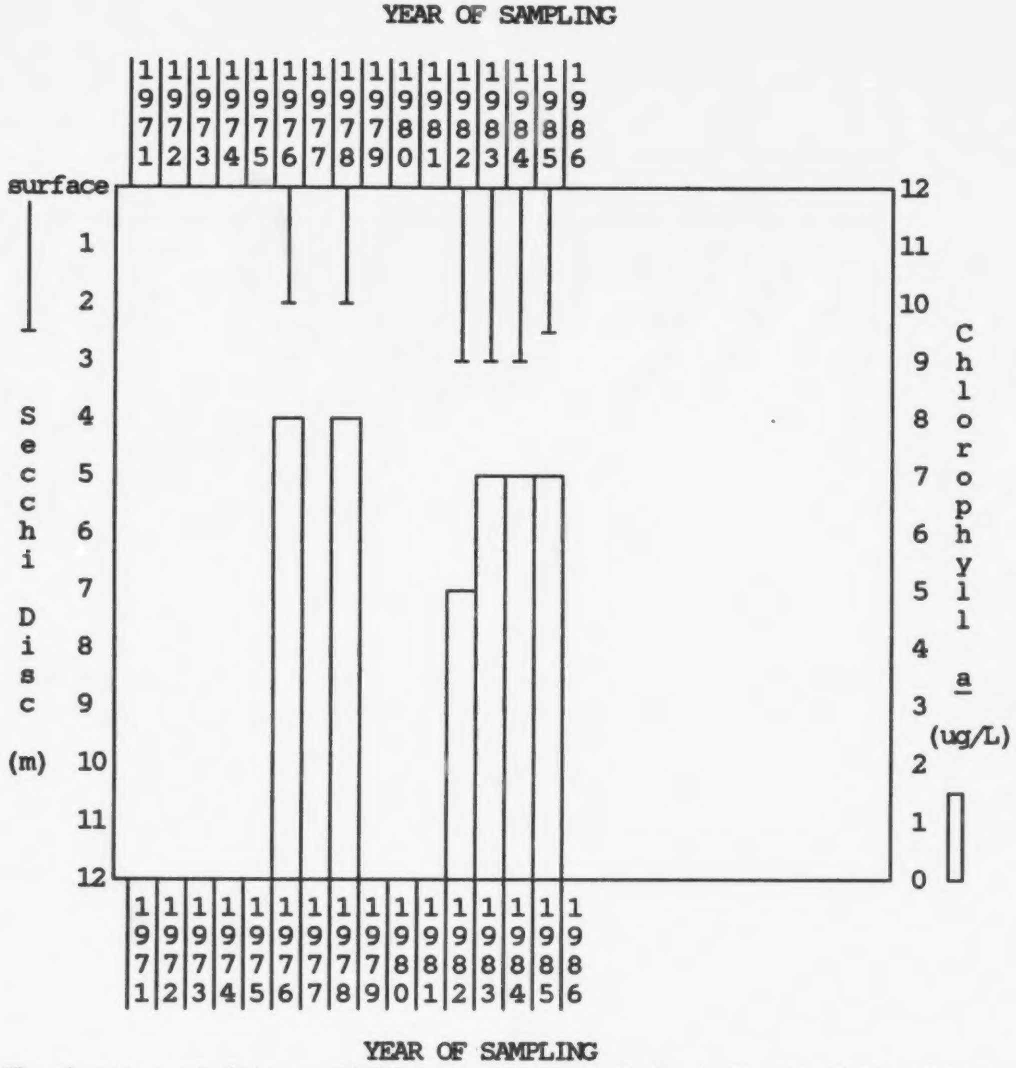


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Sturgeon Lake from 1976 to 1985. Seasonal mean data (more than 6 sampling dates) only.



The 6 years of data available for Sturgeon Lake indicate that water quality has not changed since 1976.

The degree of water clarity has been consistently low and the densities of suspended algae have been high.

We hope that you sample in 1986 to maintain the record of water quality for Sturgeon Lake.

Sunny Lake

Morrison Ward
Town of Gravenhurst

District Municipality of
Muskoka

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Sunny Lake in 1985

Station	Gordon's Cottage		North Bay	
Date	S.D.	Chl.a	S.D.	Chl.a
Aug 5	3.25	5.5	3.5	1.2
Sept 2	4.25	2.6	3.5	1.6
	-----	-----	-----	-----

Insufficient sampling was done in 1985 to obtain reliable seasonal averages. Based on the 2 results obtained, the degree of water clarity was moderate and the densities of suspended algae were moderate to high at Gordon's cottage and low in North Bay.

Figure 1: The relationship between Secchi disc and chlorophyll a for a number of recreational lakes in the province. All data are seasonal means.

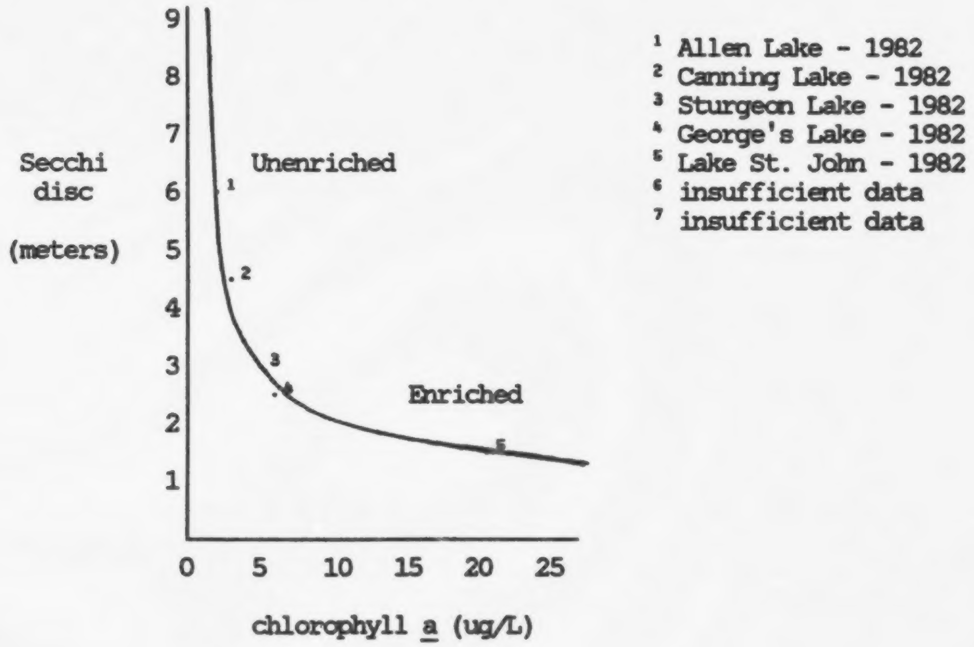
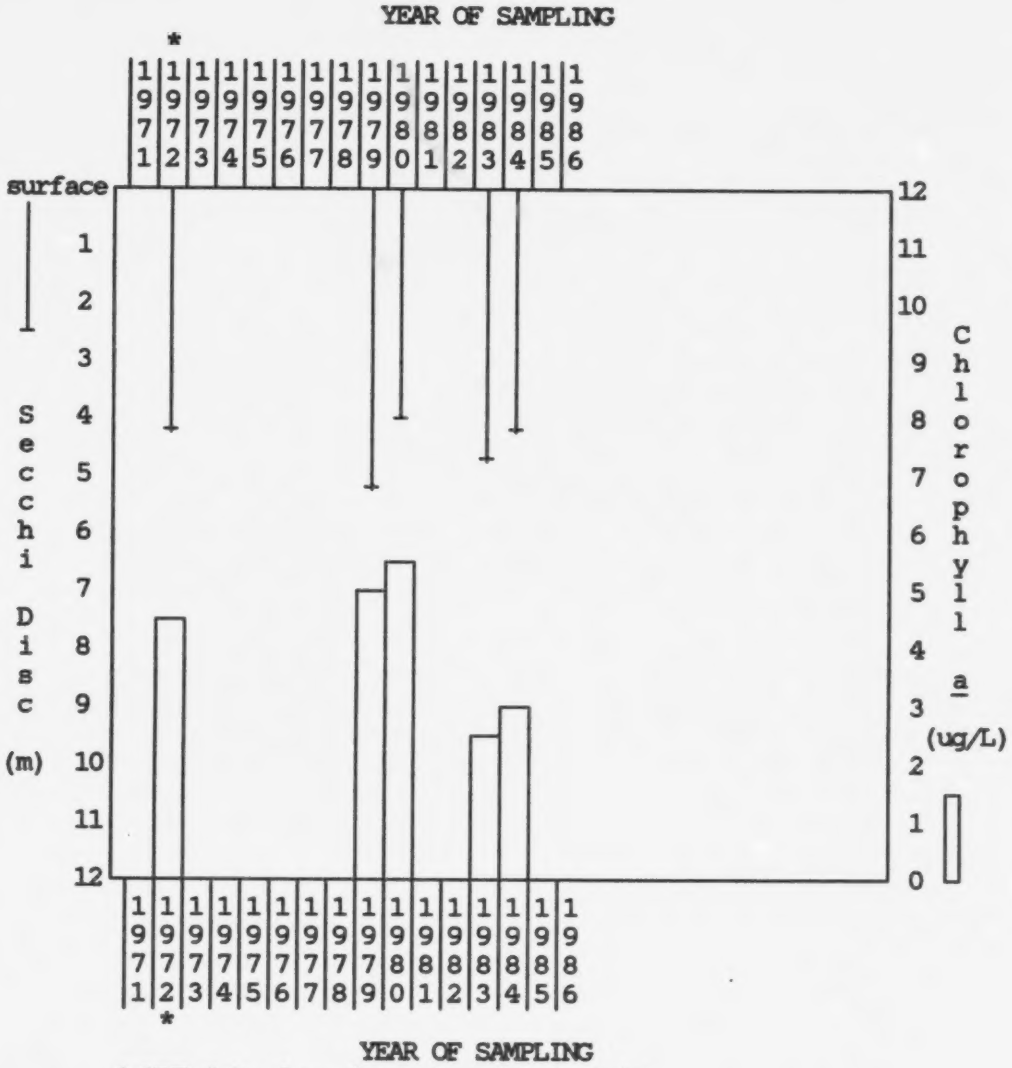


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Sunny Lake (Gordon's cottage) from 1972 to to 1984. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.

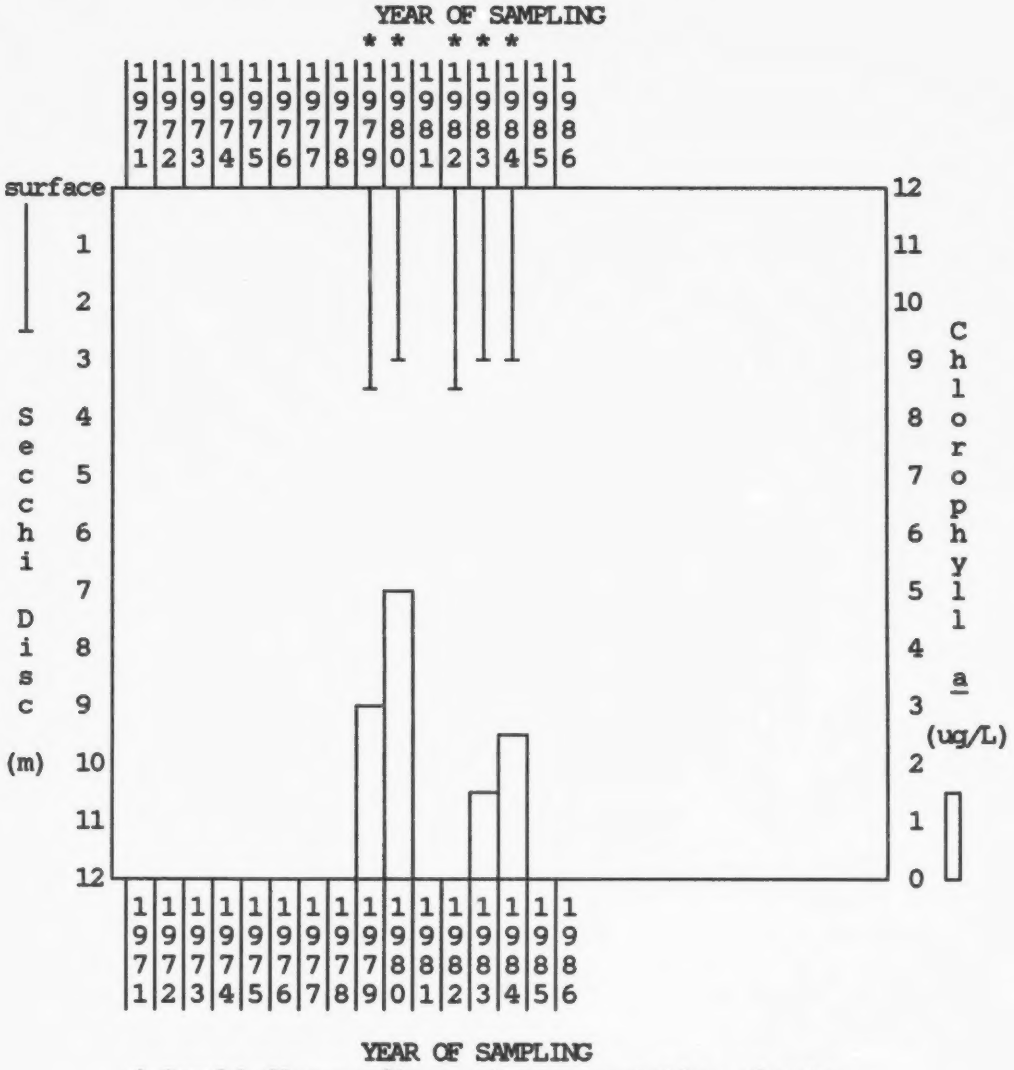


* MOE data from deepest point in lake

Insufficient sampling was done in 1985. Past results indicate moderately enriched conditions with a moderate degree of water clarity and moderate to high densities of suspended algae.

We hope that sampling is done in 1986 with increased frequency.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Sunny Lake (North Bay) from 1979 to 1984. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* Secchi disc readings not representative of water clarity since Secchi disc was on bottom

Insufficient sampling was done at this station in 1985 to obtain meaningful data. Past results indicate moderately enriched conditions with a moderately low degree of water clarity and moderate to high densities of suspended algae.

We hope that sampling is done in 1986 with increased frequency.

Tallan Lake

Chandos Township

County of Peterborough

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Tallan Lake in 1985

Station	Dock		Island	
Date	S.D.	Chl.a	S.D.	Chl.a
Aug 9	5.0	1.2	5.0	1.1
	-----	-----	-----	-----

Sampling was done on only 1 occasion in 1985 so no meaningful results were obtained. If sampling is done in 1986, sampling frequency must increase to at least 6 occasions during the ice-free period.

Figure 1: The relationship between Secchi disc and chlorophyll a for a number of recreational lakes in the province. All data are seasonal means.

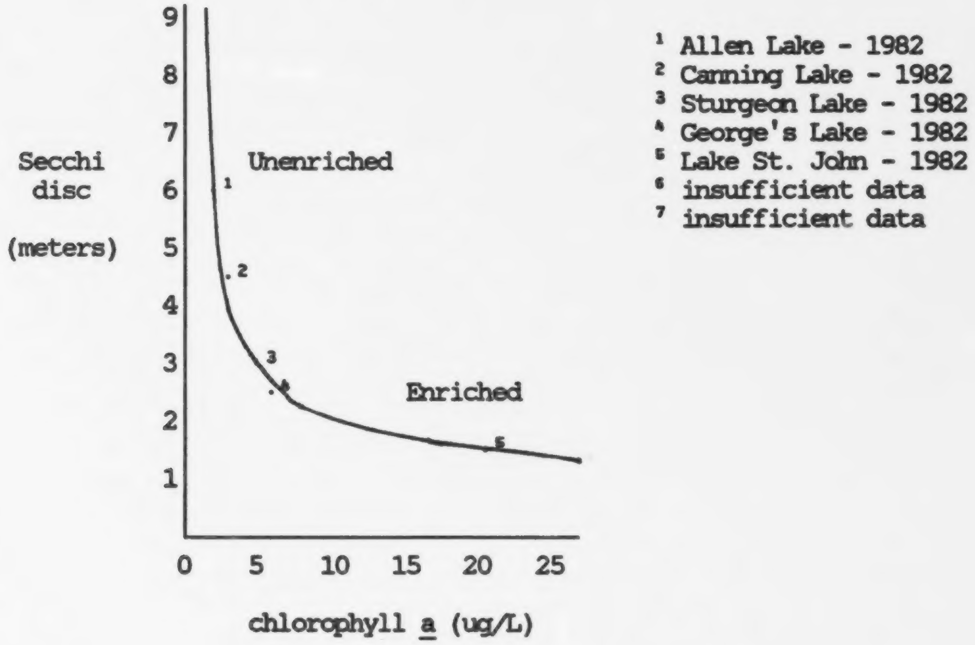
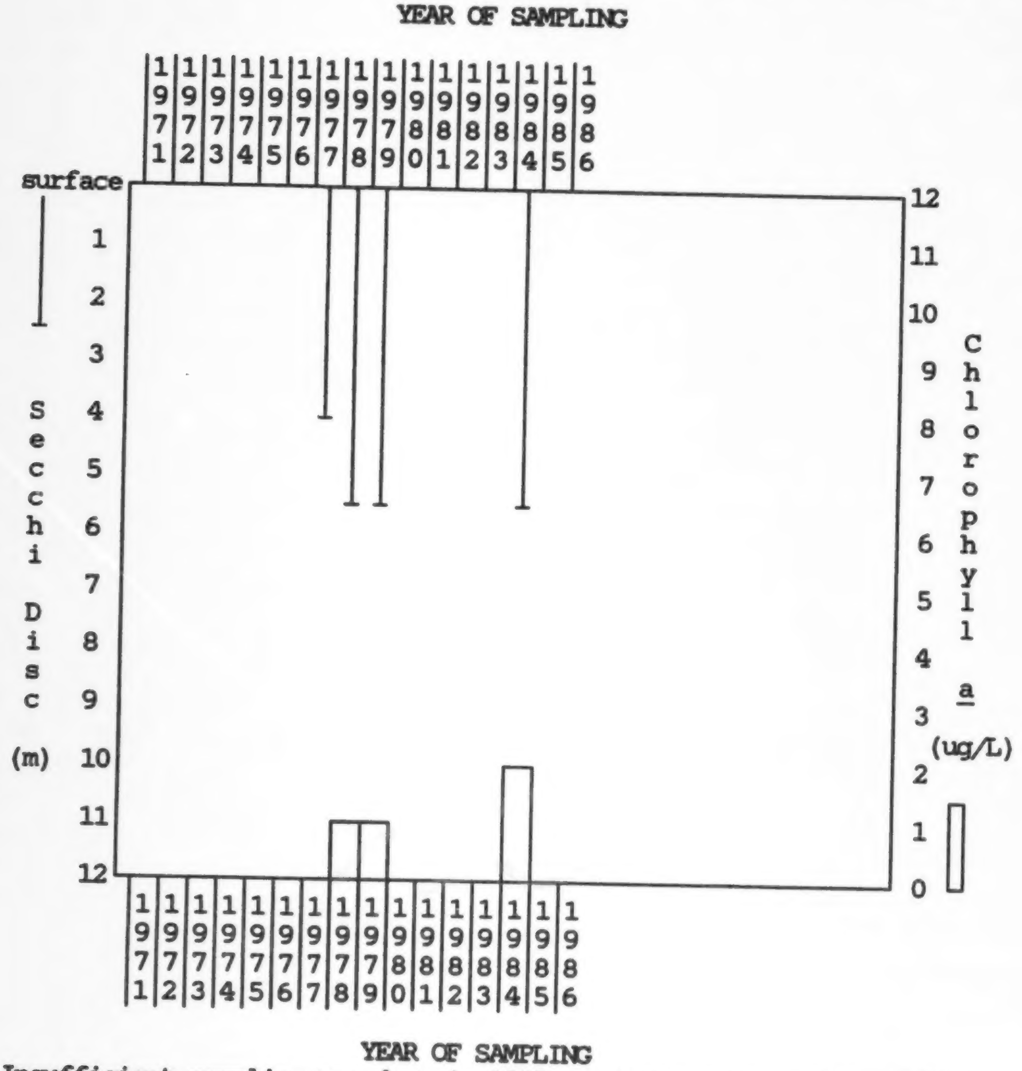
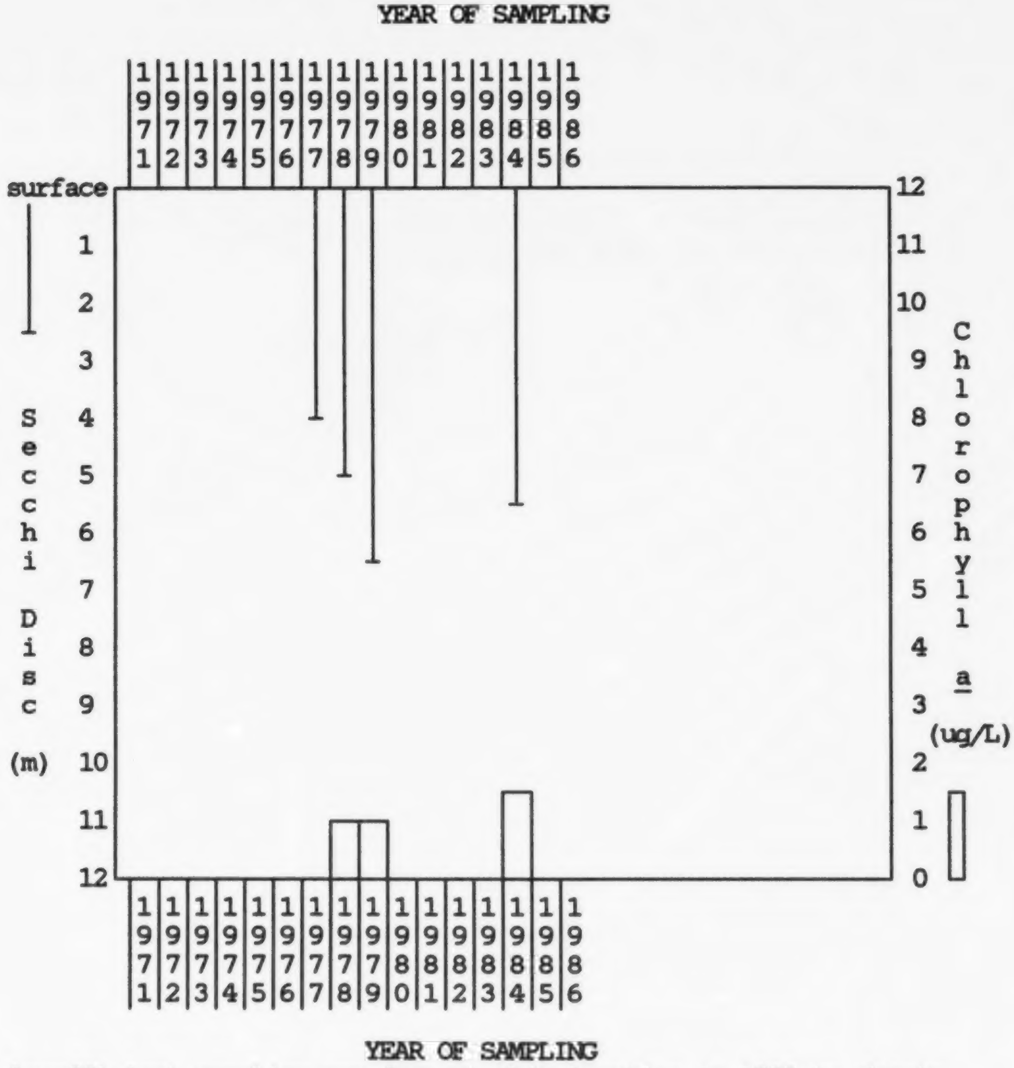


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Tallan Lake (Dock station) 1977 to 1984. Seasonal mean data (more than 6 sampling dates) only. A minimum of 4 results was required for graphing.



Insufficient sampling was done in 1985 to obtain meaningful results.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Tallan Lake (Island station) 1977 to 1984. Seasonal mean data (more than 6 sampling dates) only. A minimum of 4 results was required for graphing.



Insufficient sampling was done at this location in 1985 to obtain meaningful results.

Tasso Lake

Finlayson Ward
Township of Lake of Bays

District Municipality of
Muskoka

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Tasso Lake in 1985

Station	2nd Bay (south of dam)	
Date	S.D.	Chl.a
May 29	6.5	T X
July 28	5.0	4.0
Aug 5	6.0	1.7
Aug 25 *	5.5	6.4
	5.5	4.0

* station location not given, assumed to be same station

T X sample received at lab was more than 72 hours old

In 1985, Tasso Lake was sampled on 4 occasions.
Based on these results, the degree of water transparency was high with an average Secchi disc reading of 5.5 m.
The densities of suspended algae ranged from low to high with an average concentration of 4.0 ug/L. These concentrations appear to be high when compared to the high degree of water clarity observed in Tasso Lake. The reason for these higher concentrations in 1985 is not apparent. Tasso Lake would be considered moderately enriched with a higher than normal water clarity.

Figure 1: The relationship between Secchi disc and chlorophyll a for Tasso Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means.

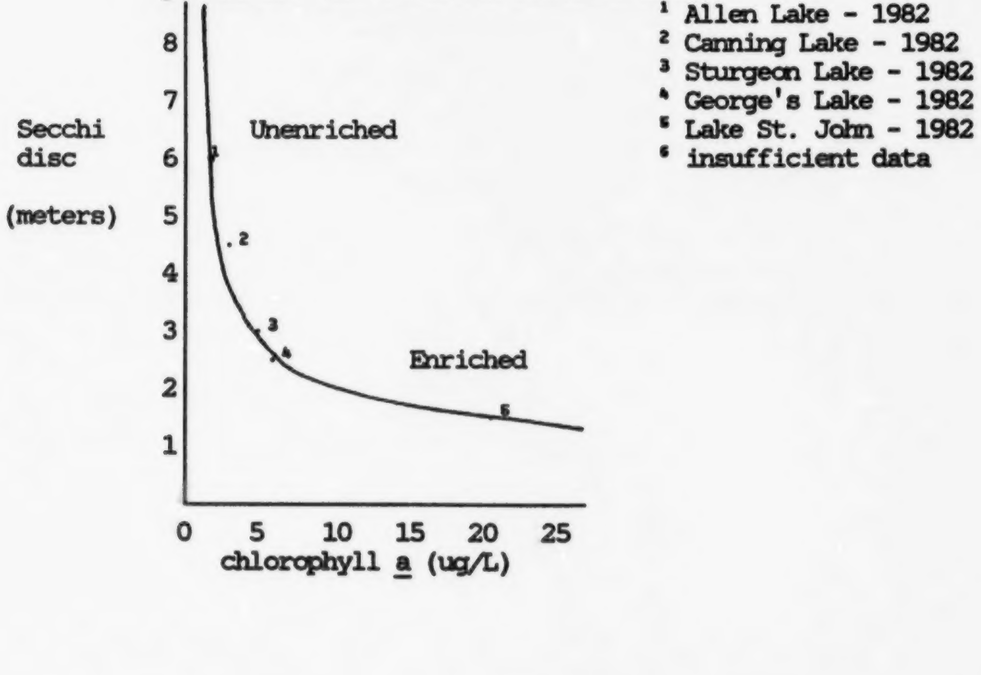
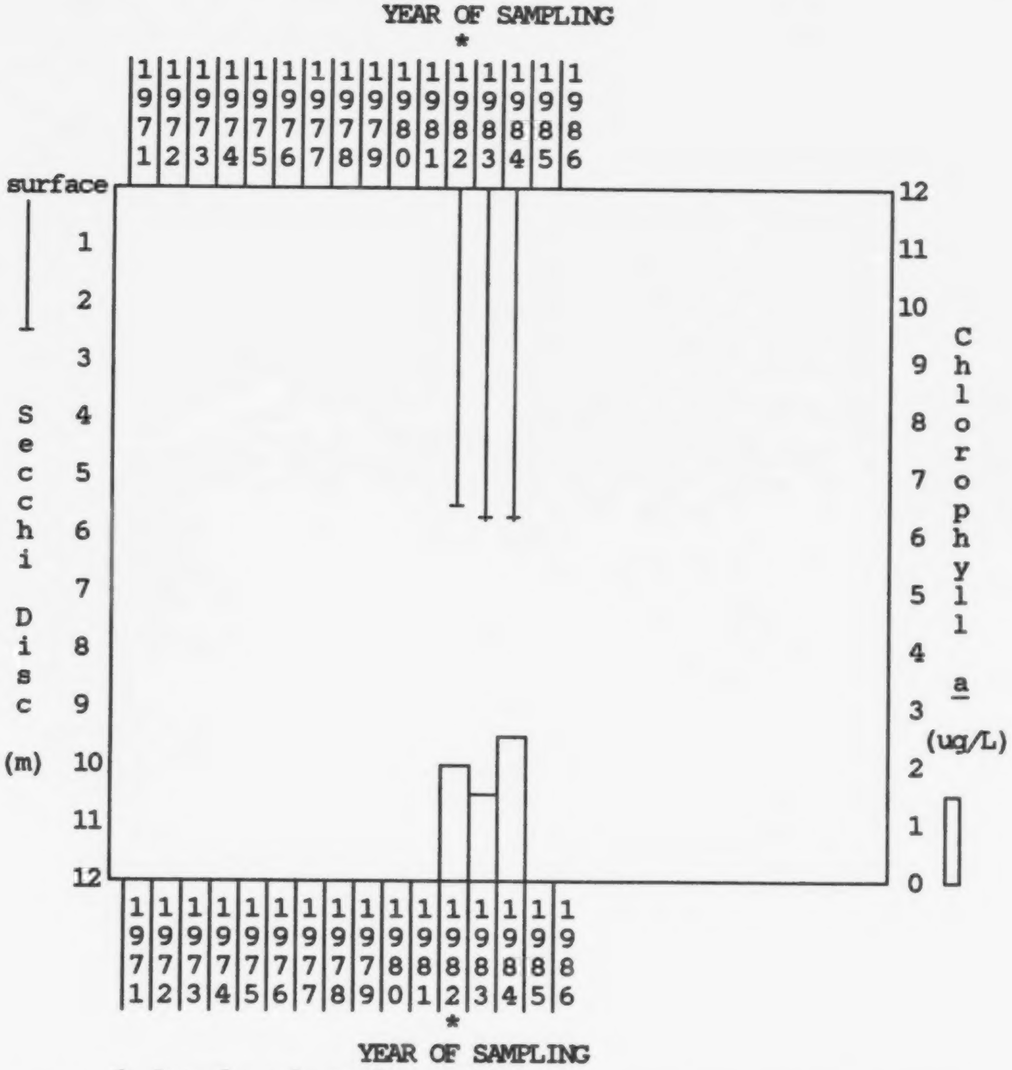


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Tasso Lake from 1982 to 1984. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* based on 4 sample results

Insufficient sampling was done in 1985 to obtain meaningful results.

Three Mile Lake

Watt Ward
Township of Muskoka Lakes

District Municipality of
Muskoka

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Three Mile Lake in 1985

Station	Green Bay West		Hammel's Bay	
Date	S.D.	Chl.a	S.D.	Chl.a
July 28	NG	TX	NG	TX
Aug 4	2.7	9.1	2.8	3.6
Aug 8	1.0	3.5	1.9	2.8
Aug 11	3.25	11.6	1.8	13.9
Aug 27	1.9	1.9	1.9	2.9
	-----	-----	-----	-----
	2.2	6.5	2.1	5.8

NG - Secchi disc reading not given T X - sample more than 72 hours old when received at lab

In 1985, sampling was done on 5 occasions. Based on the 4 reliable results obtained, the degree of water transparency was low at both stations. The densities of suspended algae were high at both stations. Based on these results, Three Mile Lake would be considered enriched. In 1986, please be sure to enter the Secchi disc readings and chlorophyll samples depths for all samples on the submission forms.

Figure 1: The relationship between Secchi disc and chlorophyll a for Three Mile Lake in 1985 and a number of recreational lakes in the province. All data are seasonal means except for Three Mile Lake.

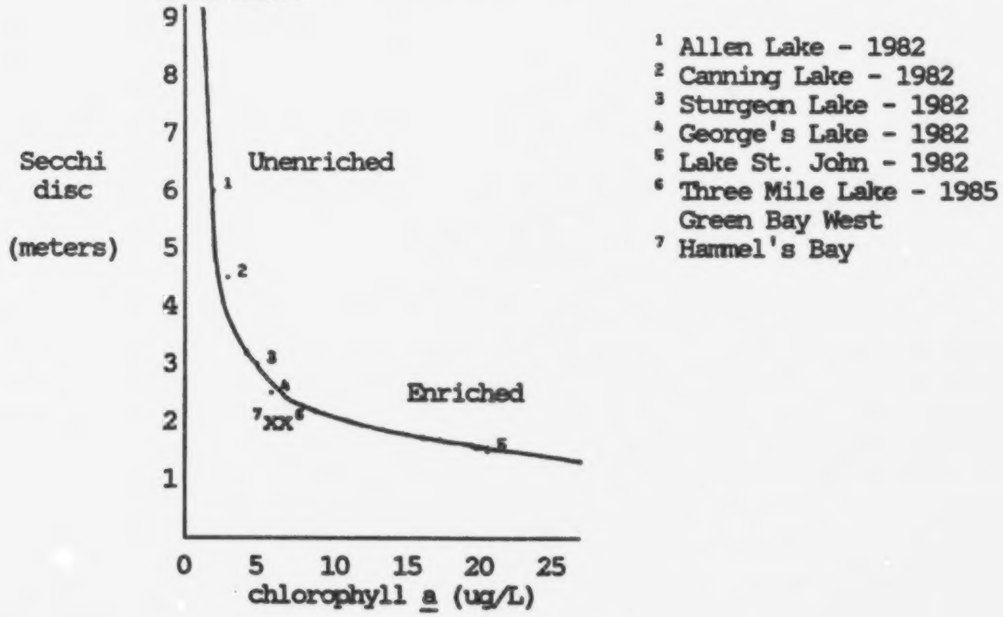
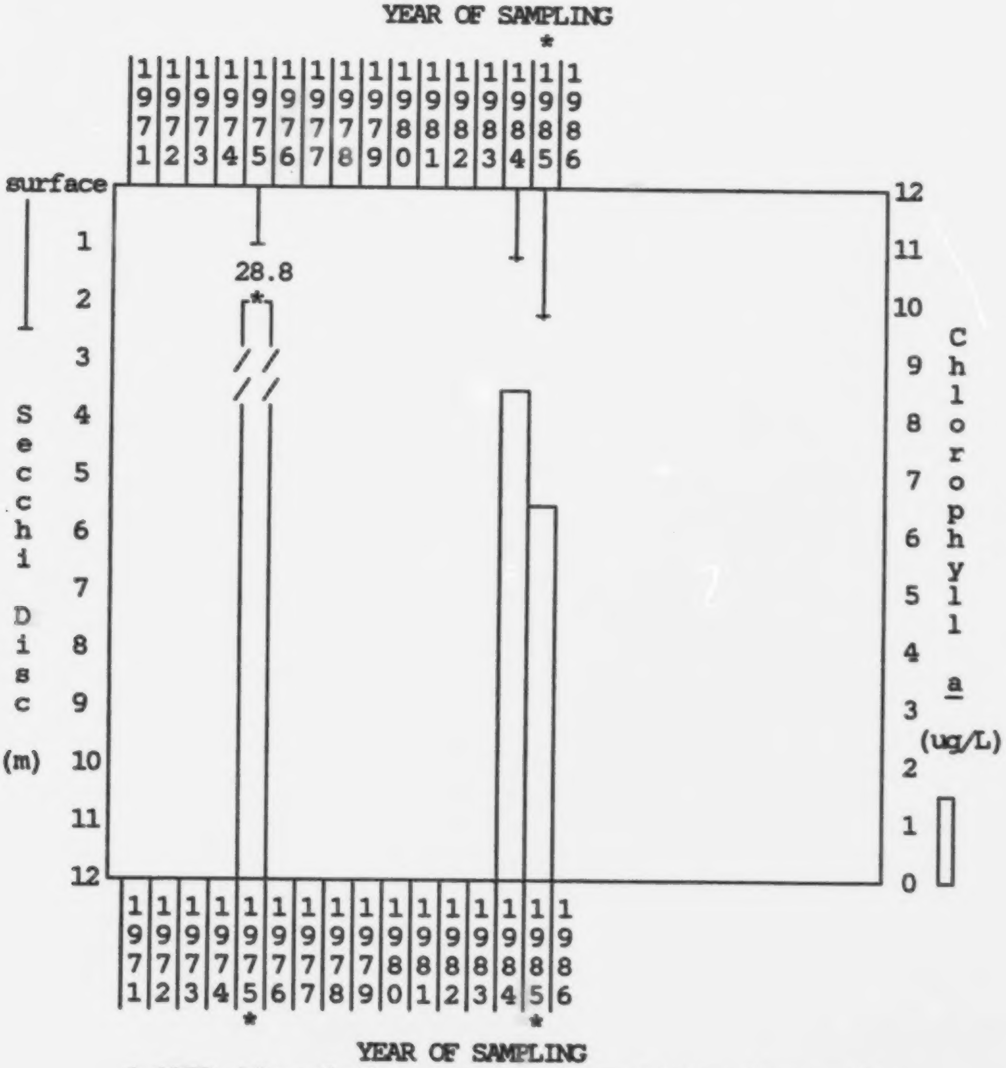


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Three Mile Lake (Green Bay) from 1975 to 1985. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



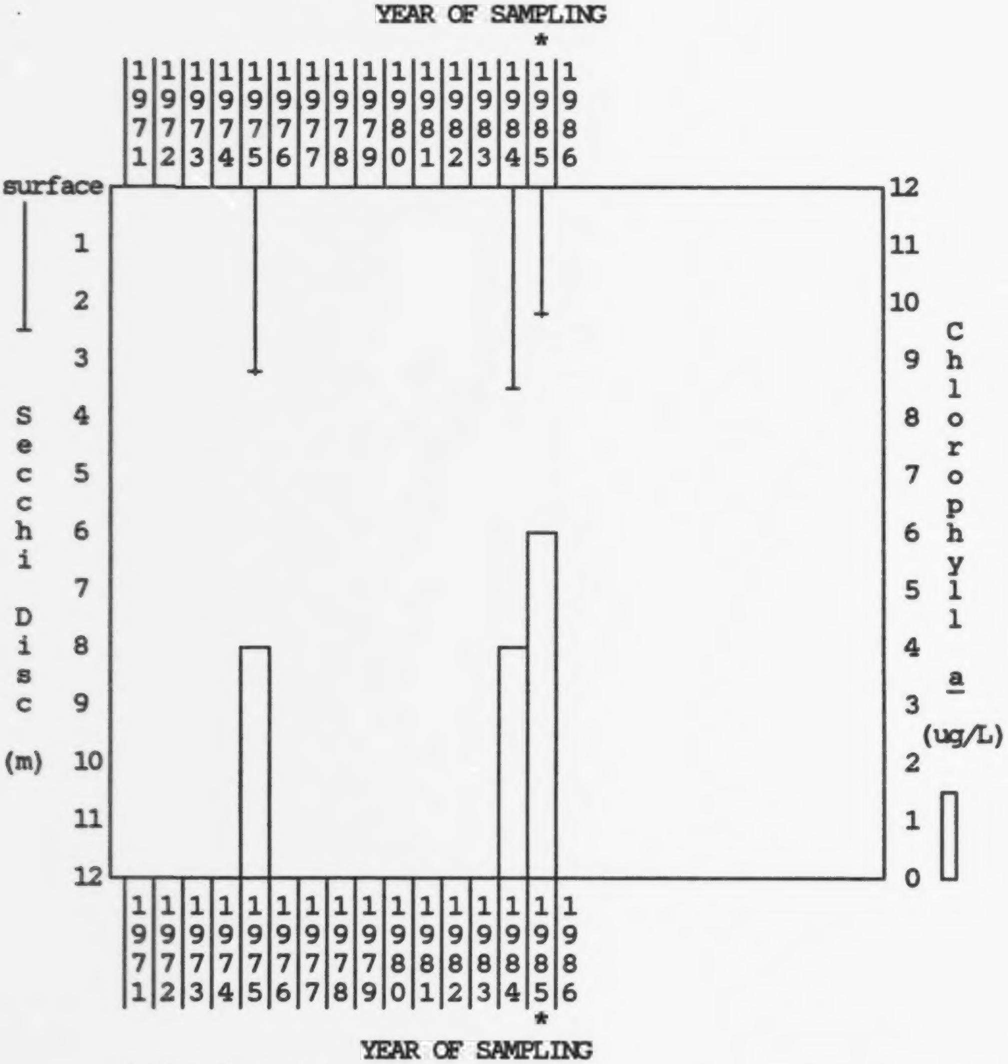
* 1975 chlorophyll a concentrations higher than scale

* 1985 based on 4 results

The results from Green Bay of Three Mile Lake indicate enriched conditions with a low degree of water clarity and high densities of suspended algae. The extremely high chlorophyll a concentrations observed in 1975 have no recurred.

We hope you continue sampling in 1986.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Three Mile Lake (Hammel's Bay) from 1975 to 1985. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* based on 4 results

The results of sampling in Hammel's Bay indicate that conditions are borderline between enriched and moderately enriched.

The degree of water clarity has been moderately low to low and densities of suspended algae have been moderately high to high for the period of record.

We hope that your participation in the program continues in 1986.

Turtle Lake

Muskoka Ward
Town of Gravenhurst

District Municipality of
Muskoka

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Turtle Lake in 1985

Station	1	
Date	S.D.	Chl.a
July 28	3.0	3.8
Aug 5	2.5	1.8
Sept 2	3.0	8.0
	-----	-----

In 1985, insufficient sampling was done on Turtle Lake to obtain reliable seasonal averages.
Based on the 3 results obtained, Turtle Lake had a low degree of water clarity and densities of suspended algae ranging from low to high.
The chlorophyll samples in this lake were taken through a depth less than twice the Secchi disc reading due to the shallowness of the lake.

Figure 1: The relationship between Secchi disc and chlorophyll a for a number of recreational lakes in the province. All data are seasonal means.

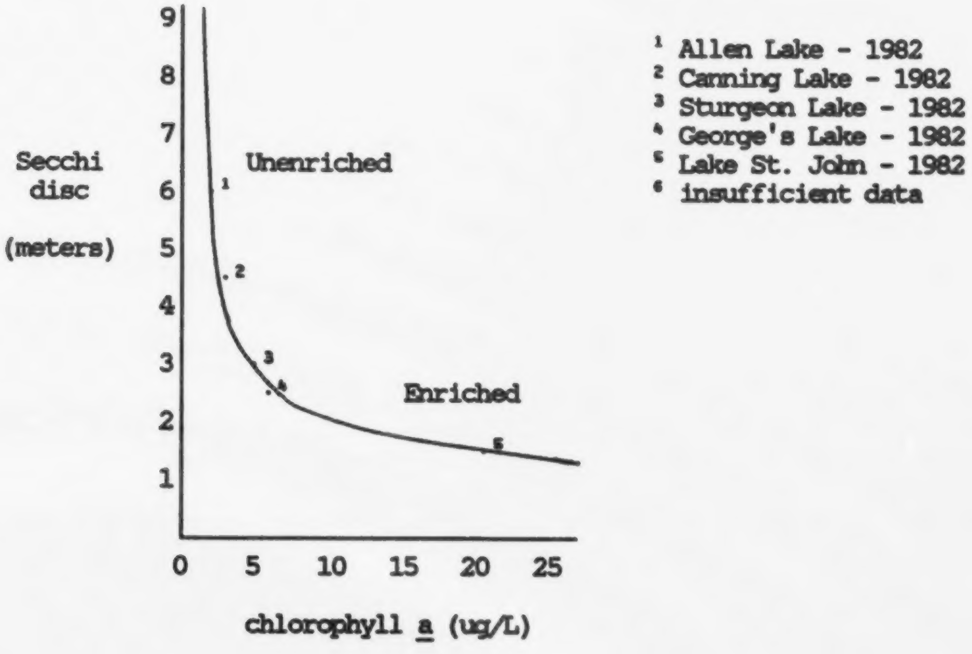
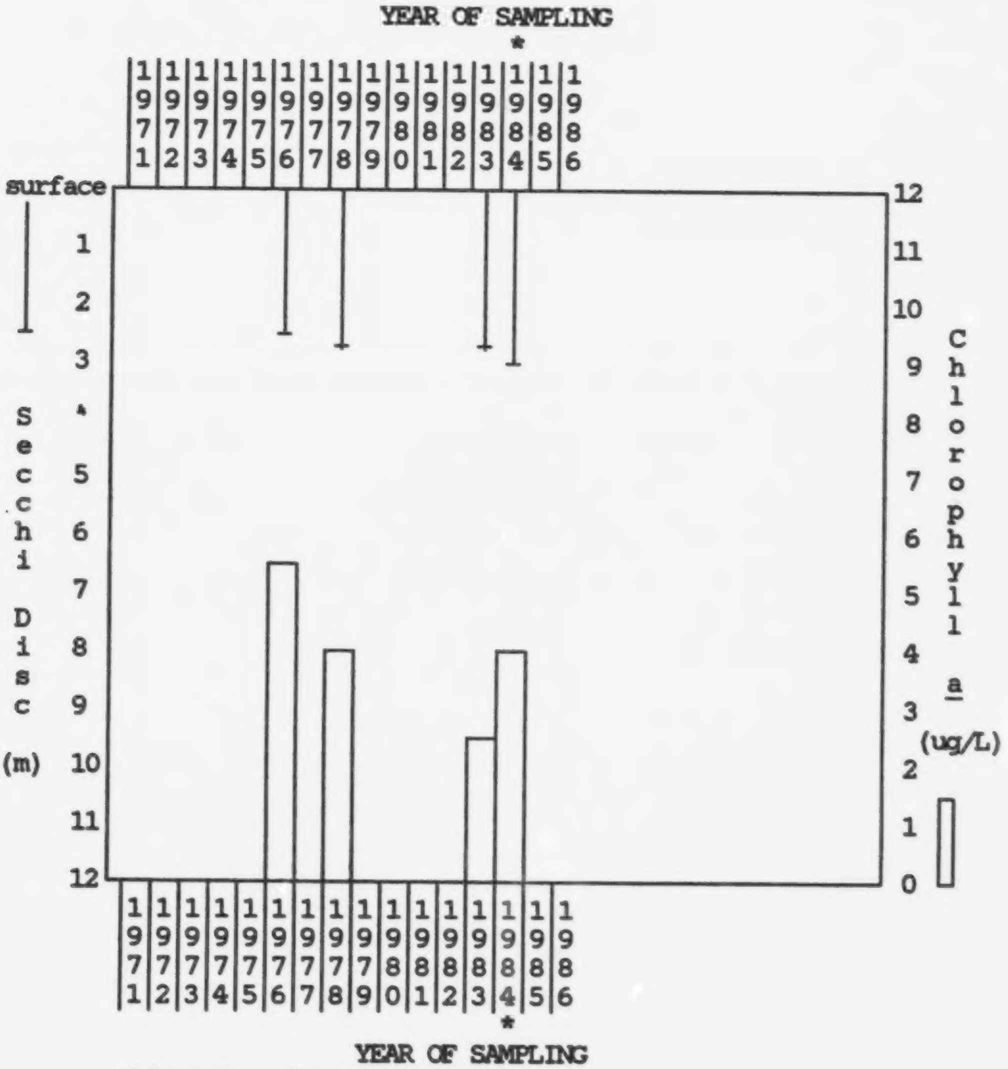


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Turtle Lake from 1976 to 1984. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* based on 4 sample results

Insufficient sampling was done in Turtle Lake in 1985 to obtain meaningful results. Past results indicate that conditions are borderline between enriched and moderately enriched with a low degree of water clarity and moderate to high densities of suspended algae. We hope that sampling continues in 1986 with increased frequency.

Twelve Mile Bay

Freeman Ward
Township of Georgian Bay

District Municipality of
Muskoka

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Twelve Mile Bay in 1985

Station	Main	
Date	S.D.	Chl.a
June 17	3.0	3.7
July 28 *	3.0	4.1
Aug 11 *	4.0	4.9
Sept 2 *	4.0	4.0
	3.5	4.2

* sampling date not given

In 1985, sampling was done on 4 occasions.
Based on these results, Twelve Mile Bay would be considered moderately enriched with a moderate degree of water clarity and high densities of suspended algae.
In 1986, please be sure to enter the sampling dates for all samples on the submission forms.

Figure 1: The relationship between Secchi disc and chlorophyll a for Twelve Mile Bay in 1985 and a number of recreational lakes in the province. All data are seasonal means except for Twelve Mile Bay.

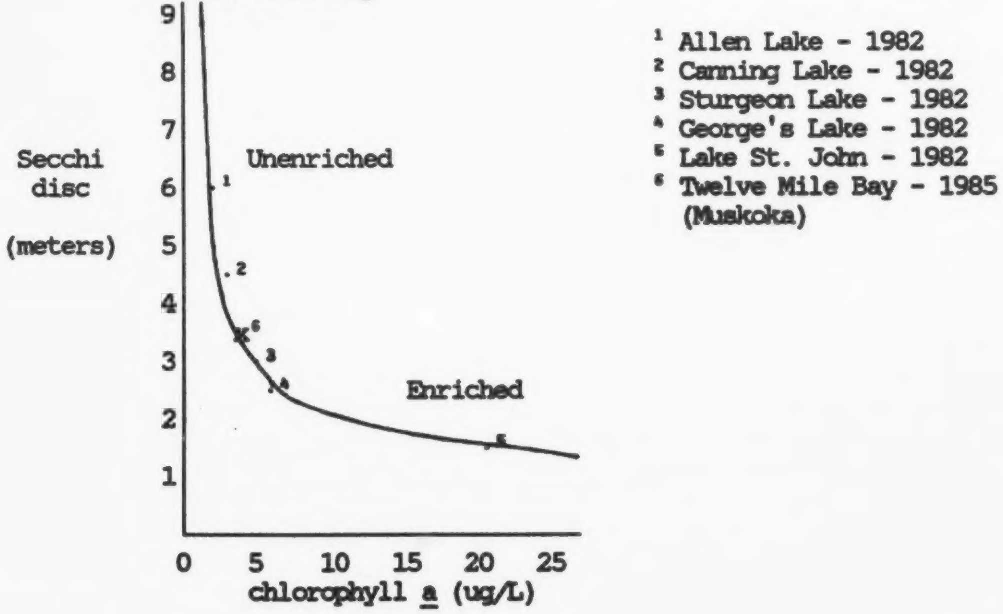
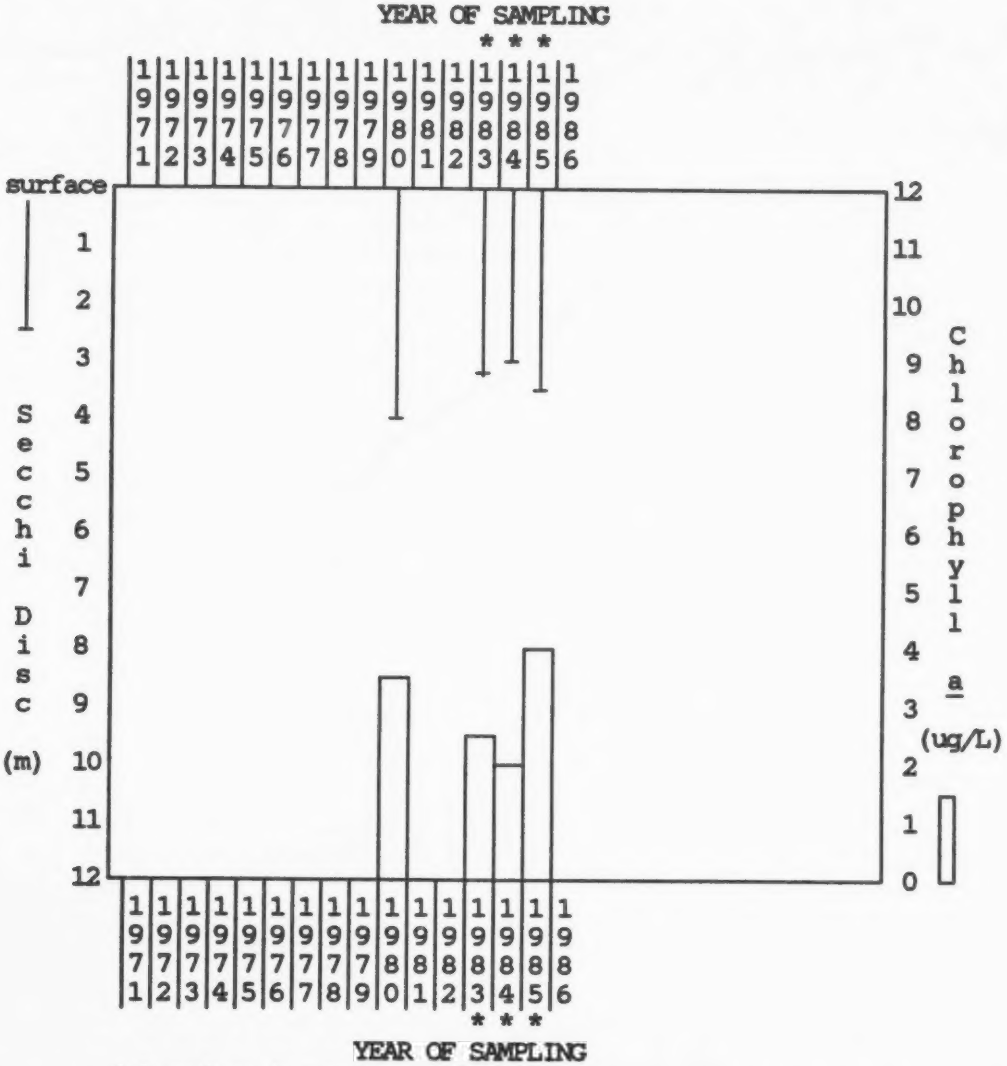


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Twelve Mile Bay from 1980 to 1985. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* based on 4 sample results

The 4 years of results available for Twelve Mile Bay indicate that water quality has not changed since 1980.

The degree of water clarity has been moderately low for the period of record and the densities of suspended algae have been moderate.

We hope you continue to sample in 1986.

Twelve Mile Lake

Minden Township

County of Haliburton

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Twelve Mile Lake in 1985

Station	Main	
Date	S.D.	Chl.a
May 19	4.0	1.7
July 28	5.0	L 1.0
Aug 11	6.0	1.4
Aug 25	5.0	2.3
Sept 2	5.0	1.9
	5.0	L 1.7

In 1985, sampling was done on 5 occasions on Twelve Mile Lake. The degree of water transparency was high with an average Secchi disc reading of 5.0 m. Densities of suspended algae were low with an average chlorophyll a concentration of 1.7 ug/L.

Based on the 1985 results, Twelve Mile Lake would be considered unenriched with excellent water quality.

Figure 1: The relationship between Secchi disc and chlorophyll a for Twelve Mile Lake in 1985 and a number of recreational lakes in the province.

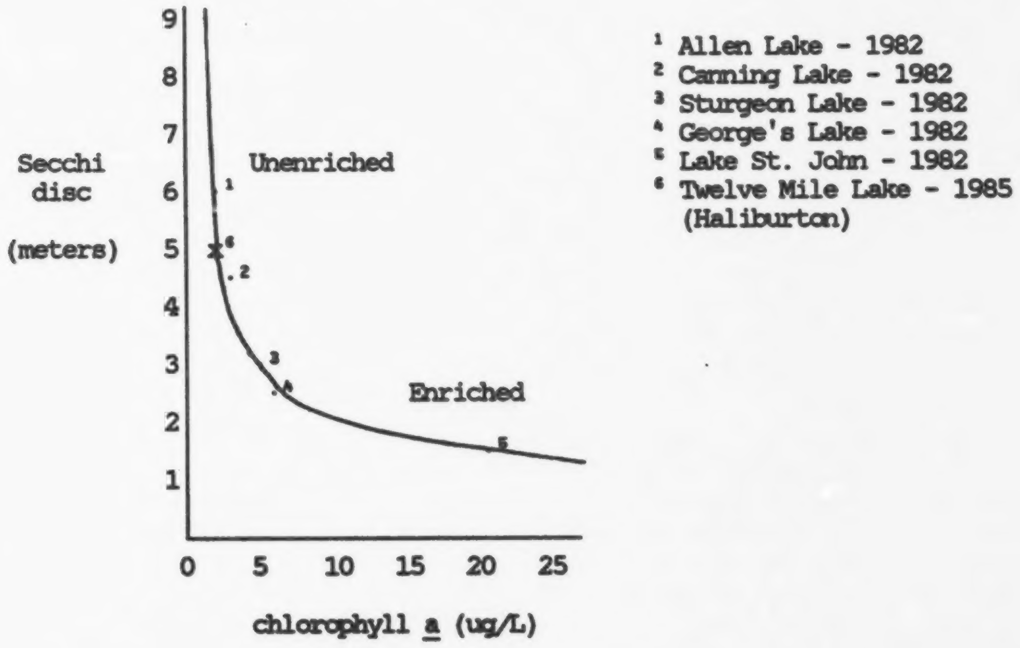
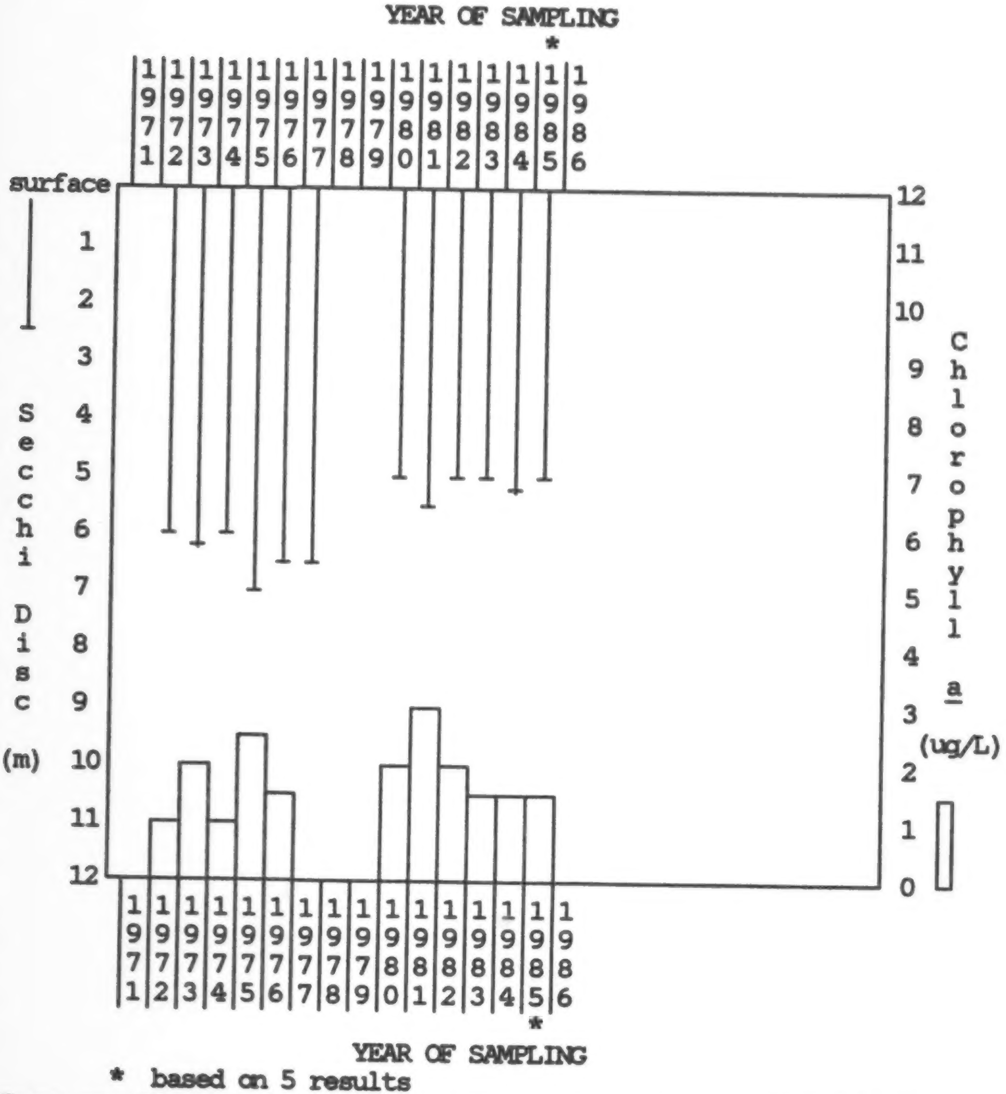


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Twelve Mile Lake in Haliburton from 1972 to 1985. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* based on 5 results

There are 12 years of reliable seasonal average data available for Twelve Mile Lake providing an excellent historical record of water quality. This record indicates that there has been an overall decline in the degree of water transparency. Readings from 1972 to 1976 were within the range of 6 to 7 m and from 1980 to 1985 the readings ranged from 5 to 5.5 m.

There has also been a slight increase in chlorophyll a concentrations with levels from 1972 to 1976 ranging from 1 to 2.5 ug/L and from 1980 to 1985 concentrations ranged from 1.3 to 3.1 ug/L.

The overall change in water quality in Twelve Mile Lake most likely reflects the influence of the Gull River which flushes Twelve Mile Lake.

Water quality of Twelve Mile Lake continues to be excellent with a high degree of clarity and low densities of suspended algae.

Waseosa Lake

Chaffey Ward
Town of Huntsville

District Municipality of
Muskoka

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Waseosa Lake in 1985

Station	Main	
Date	S.D.	Chl.a
Aug 11	3.5	5.4
Aug 25	3.0	7.0
Sept 2	3.0	5.5
	-----	-----

In 1985, insufficient sampling was done to obtain reliable seasonal averages. Based on the 3 results obtained in 1985, Waseosa Lake would be considered enriched with a moderately low degree of water clarity and high densities of suspended algae.

Figure 1: The relationship between Secchi disc and chlorophyll a for a number of recreational lakes in the province. All data are seasonal means.

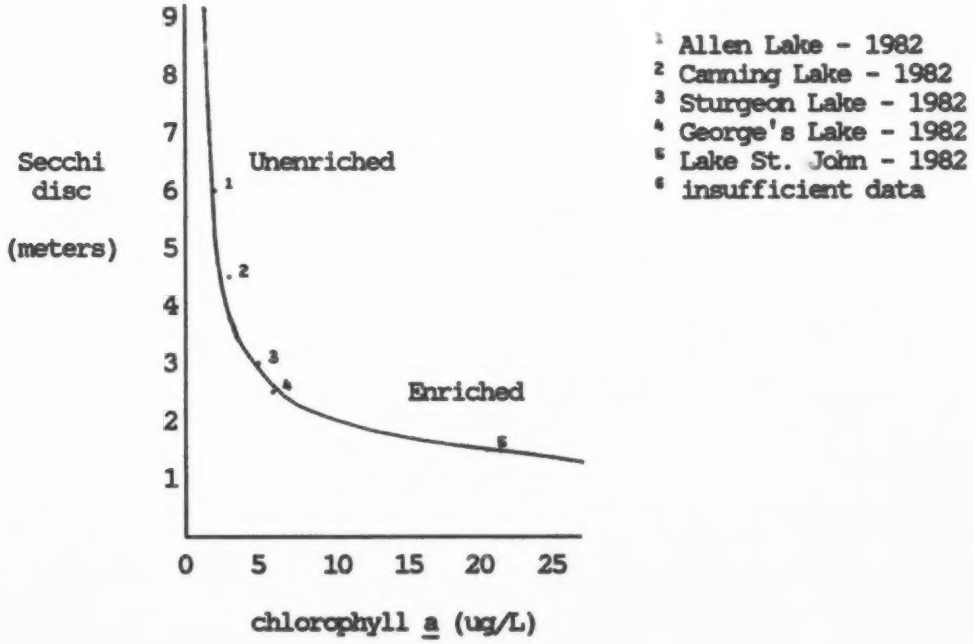
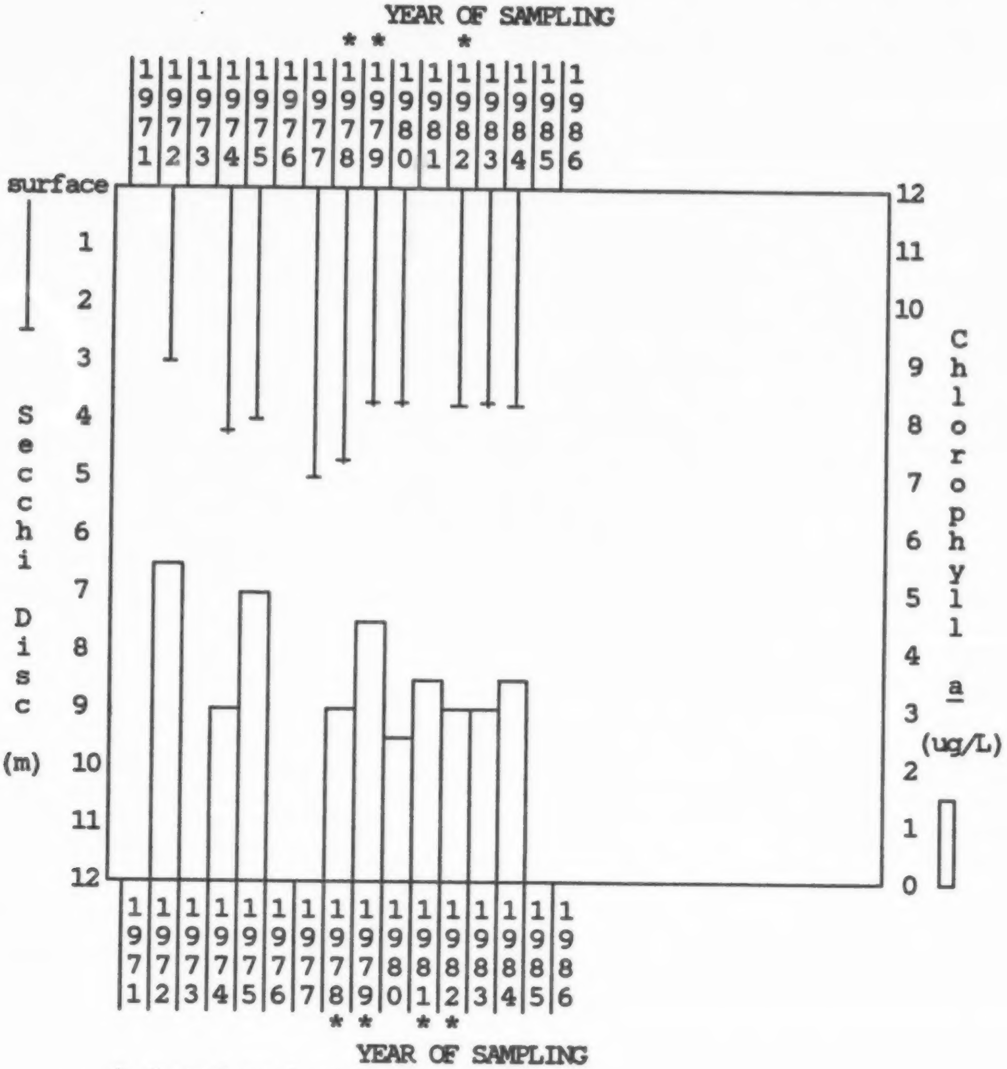


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Waseosa Lake from 1972 to 1984. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



* based on 4 or 5 sample results

Insufficient sampling was done on Lake Waseosa in 1985 to obtain meaningful data.

Past results indicate that conditions are moderately enriched.

The degree of water clarity has been moderate for the period of record and densities of suspended algae appear to have declined from high densities in 1972 to moderate densities from 1980 to 1984.

We hope sampling is done in 1986 with increased frequency.

Wenona (Little Dudmon) Lake

Dudley Township

County of Haliburton

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Wenona Lake in 1985

Station	North		South	
Date	S.D.	Chl.a	S.D.	Chl.a
July 28	3.0	2.5	3.0	2.3
Sept 2	4.25	2.1	5.0	2.0
Oct 14	6.5	1.8	6.0	2.0
	-----	-----	-----	-----

In 1985, insufficient sampling was done to obtain reliable seasonal averages. Based on the 3 results available, the degree of water transparency ranged from low to high and the densities of suspended algae were moderately low. These results would tend to indicate moderately enriched conditions.

Figure 1: The relationship between Secchi disc and chlorophyll a for a number of recreational lakes in the province.

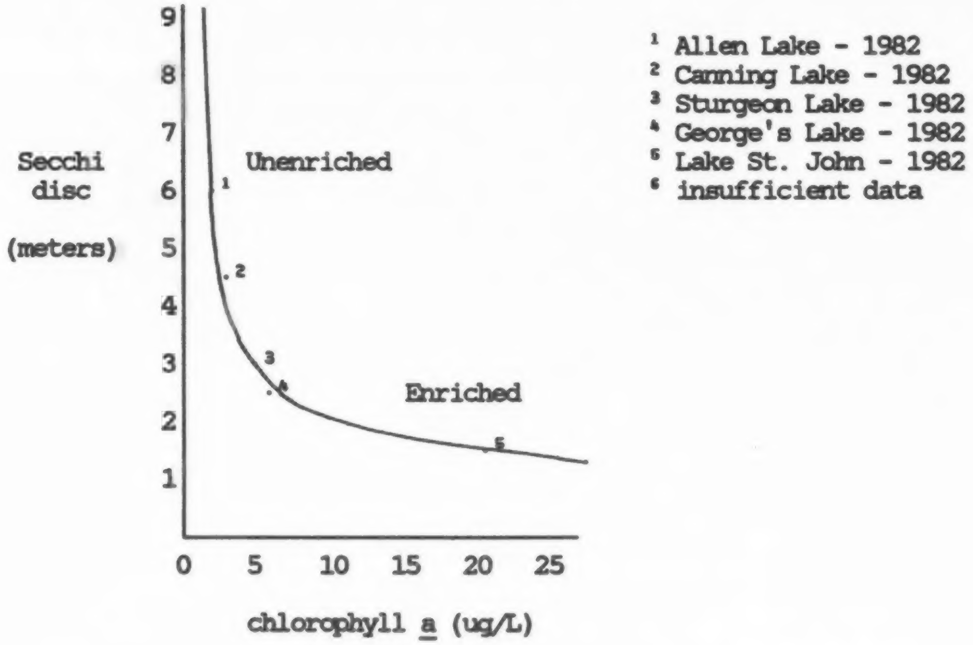
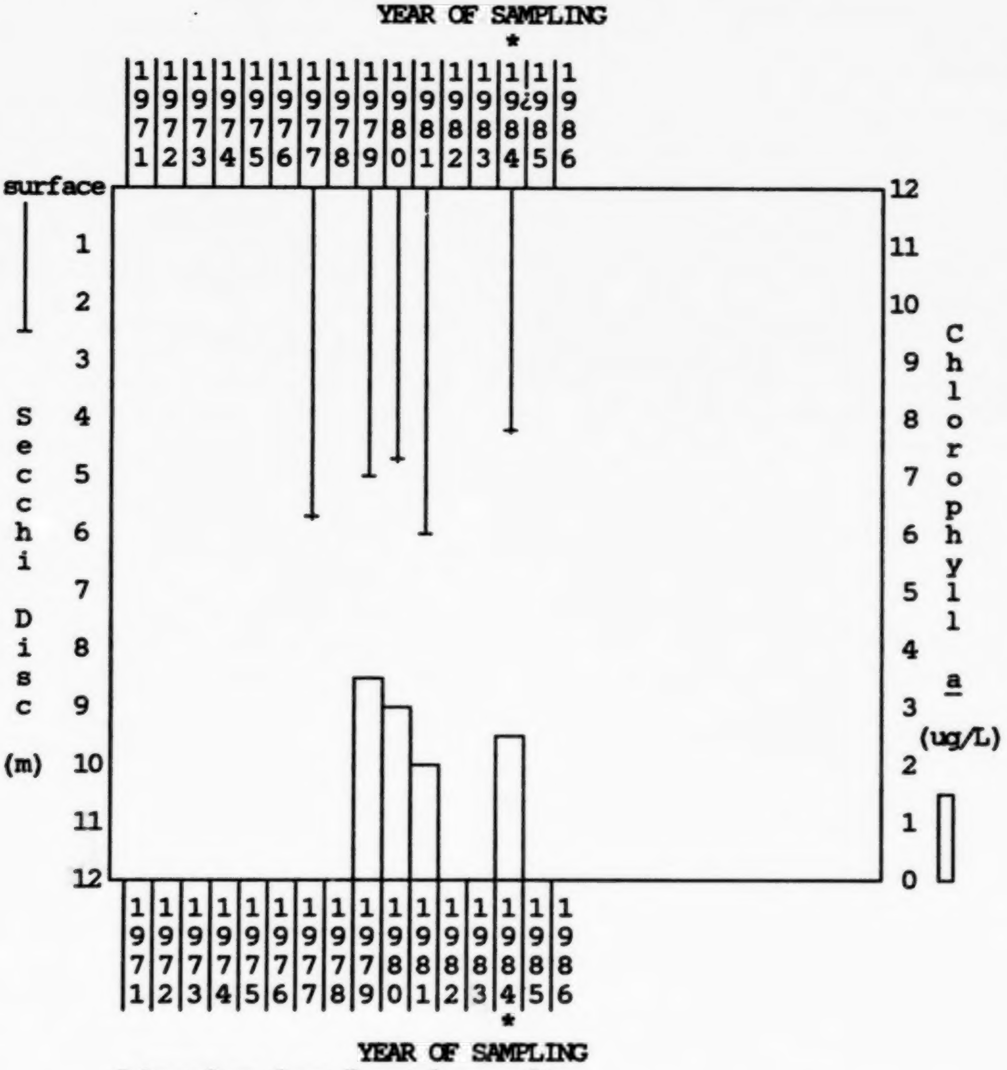


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Wenona Lake (North station) from 1977 to 1984. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.

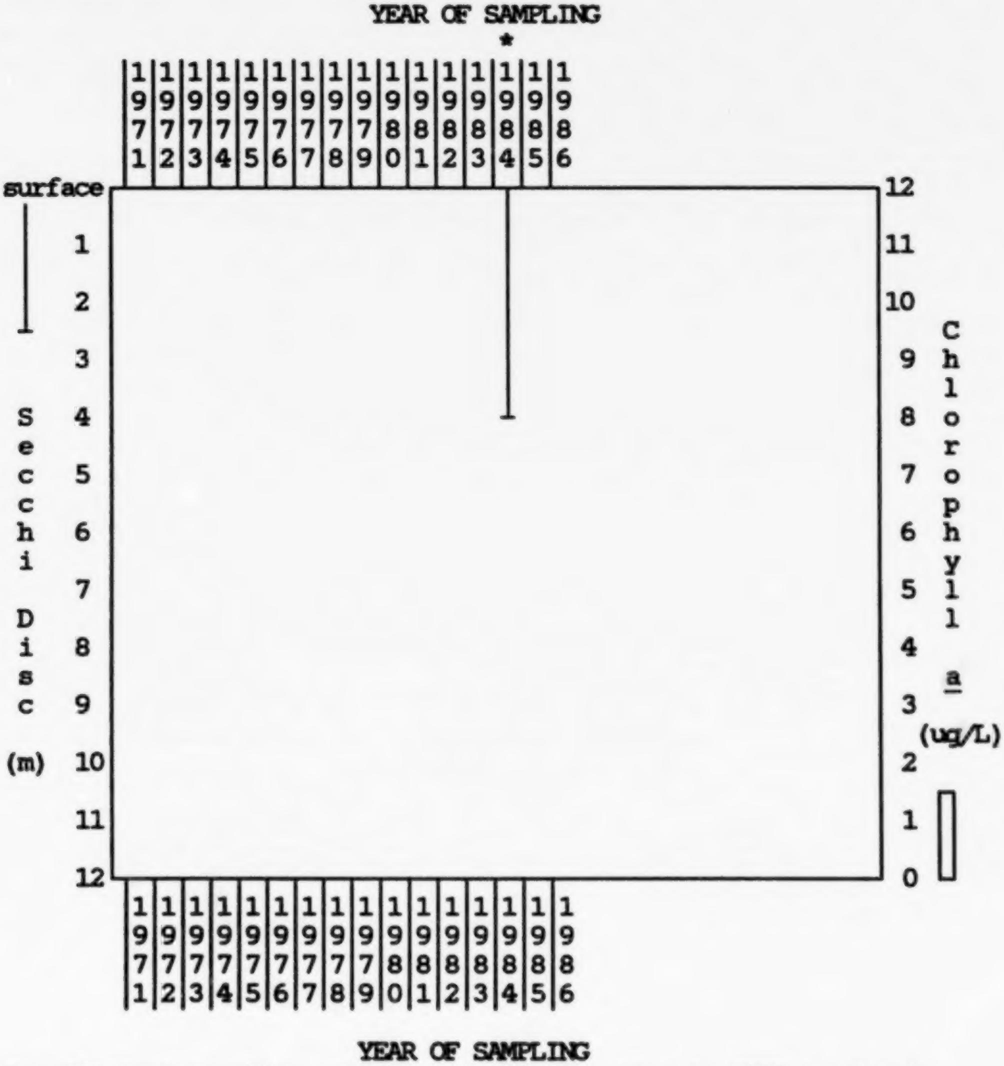


* based on 4 or 5 sample results

Insufficient sampling was done in 1985 to obtain meaningful results. Past results indicate conditions borderline between moderately enriched and unenriched.

We hope sampling at this station is done in 1986 with increased frequency.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Wenona Lake (South station) from 1984. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. At least 4 results were required for graphing.



Insufficient sampling was done at this location in 1985 to obtain meaningful results. We hope that sampling is done in 1986 with increased frequency.

Wood Lake

Oakley Ward
Town of Bracebridge

District Municipality of
Muskoka

Table 1: Secchi Disc (m) and chlorophyll a (ug/L) data collected from Wood Lake in 1985

Station	Middle Channel		Off Reeves NE		Off Day Is.		West Bay	
Date	S.D.	Chl.a	S.D.	Chl.a	S.D.	Chl.a	S.D.	Chl.a
Aug 5	- -	- -	4.0	3.2	- -	- -	- -	- -
Sept 1	5.0	1.9	- -	- -	4.0	2.6	4.0	1.9

Insufficient sampling was done in 1985 to obtain any meaningful results. In 1986, we suggest that 1 central station be sampled at least 6 times throughout the season. This will provide reliable and representative water quality information.

Figure 1: The relationship between Secchi disc and chlorophyll a for a number of recreational lakes in the province. All data are seasonal means.

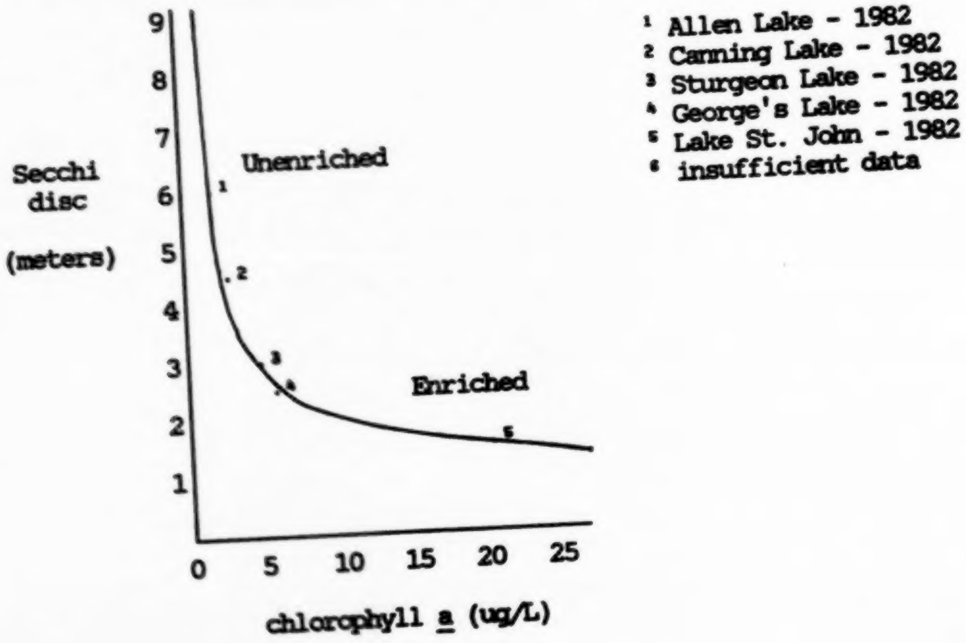
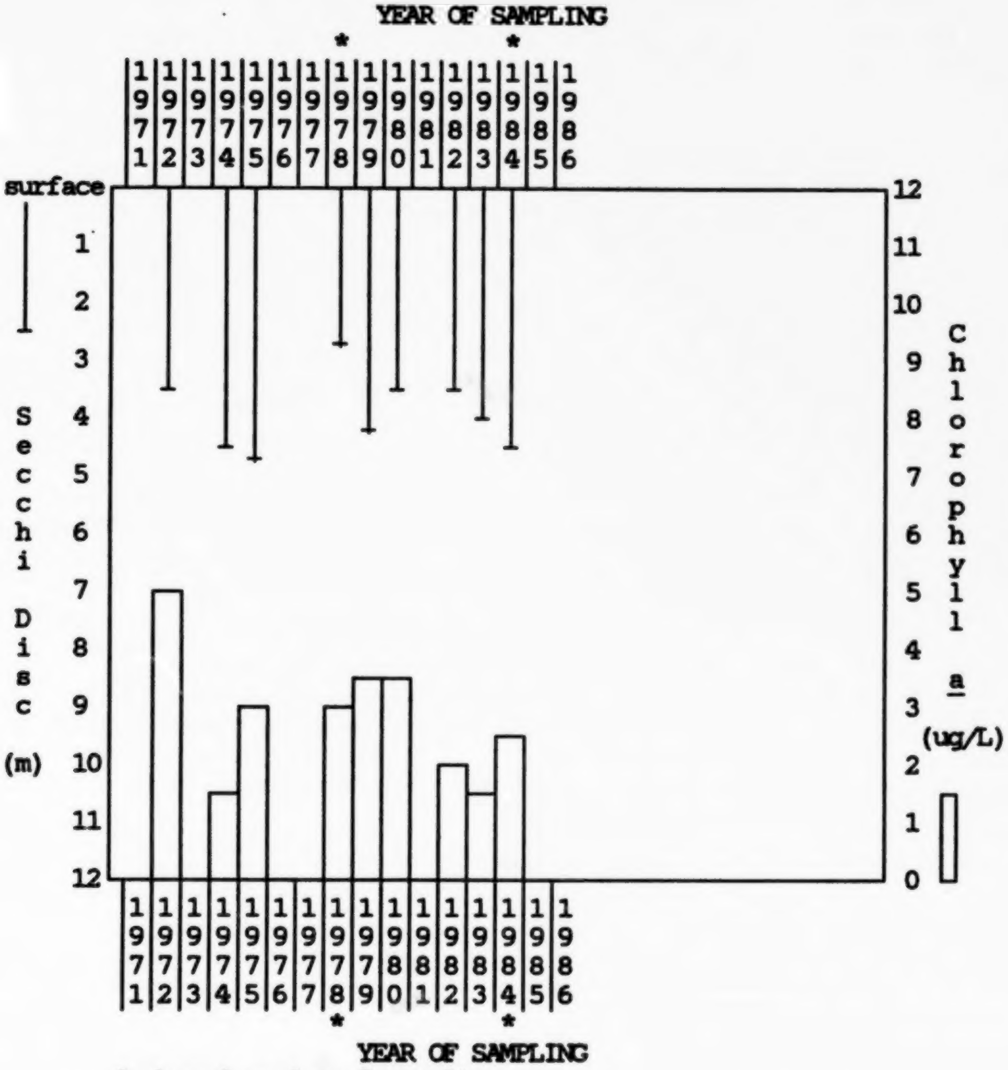


Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Wood Lake (Middle) from 1972 to 1984. Seasonal mean data (more than 6 sampling dates) unless otherwise specified. A minimum of 4 results was required for graphing.



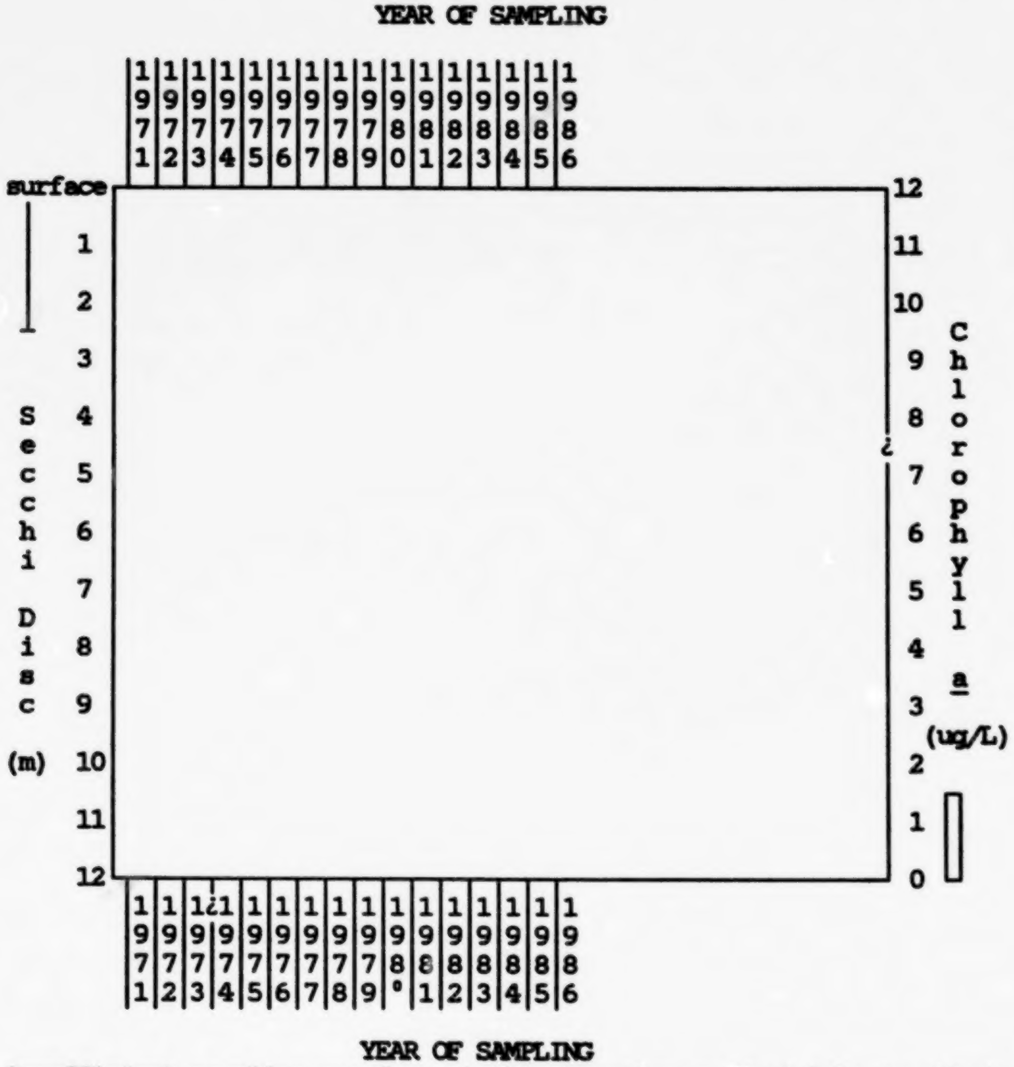
* based on 4 or 5 results

Insufficient sampling was done at this location in 1985 to obtain meaningful results. Past results indicate moderately enriched conditions.

The degree of water clarity has been moderate and the densities of suspended algae have been moderate except in 1972 when the densities were high.

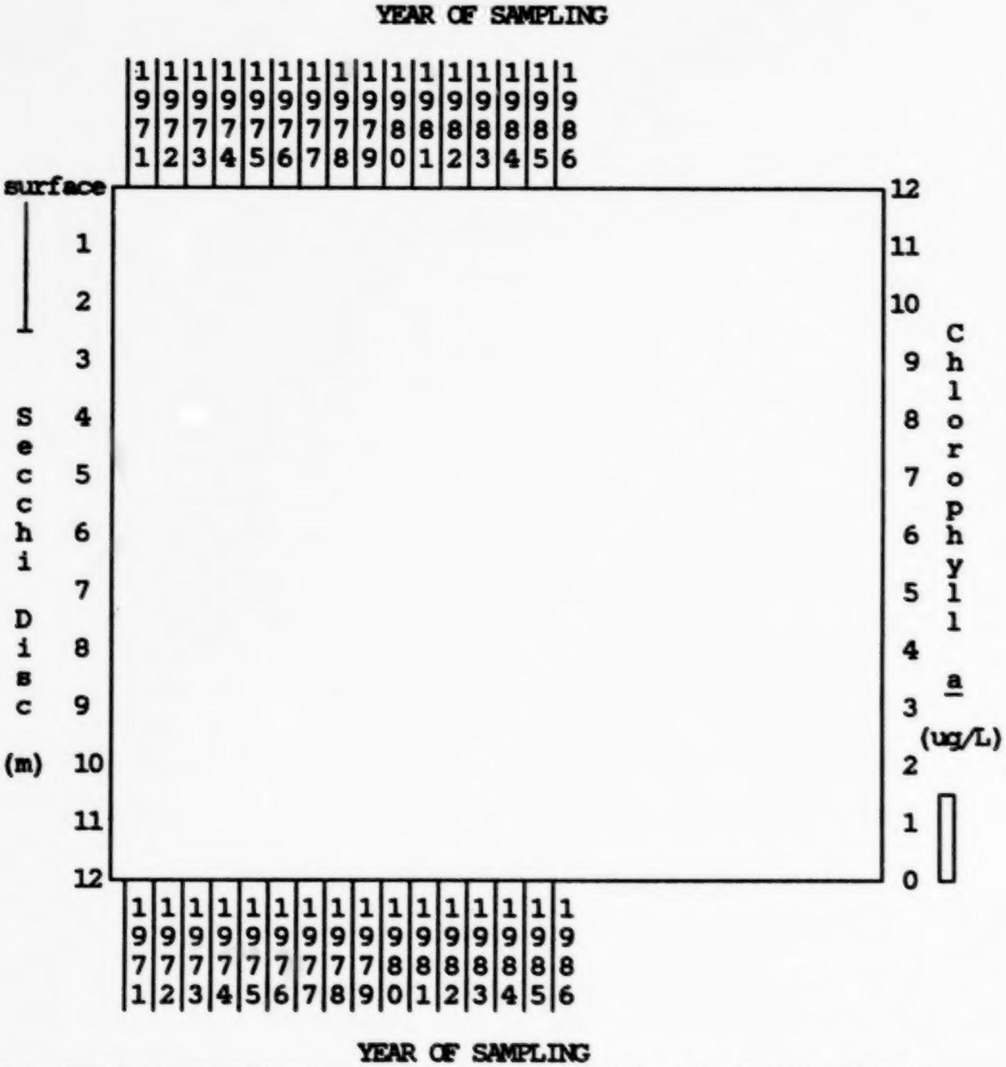
We hope that sampling continues in 1986 with increased frequency.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Wood Lake (Northeast off Reeves)
A minimum of 4 results was required for graphing.



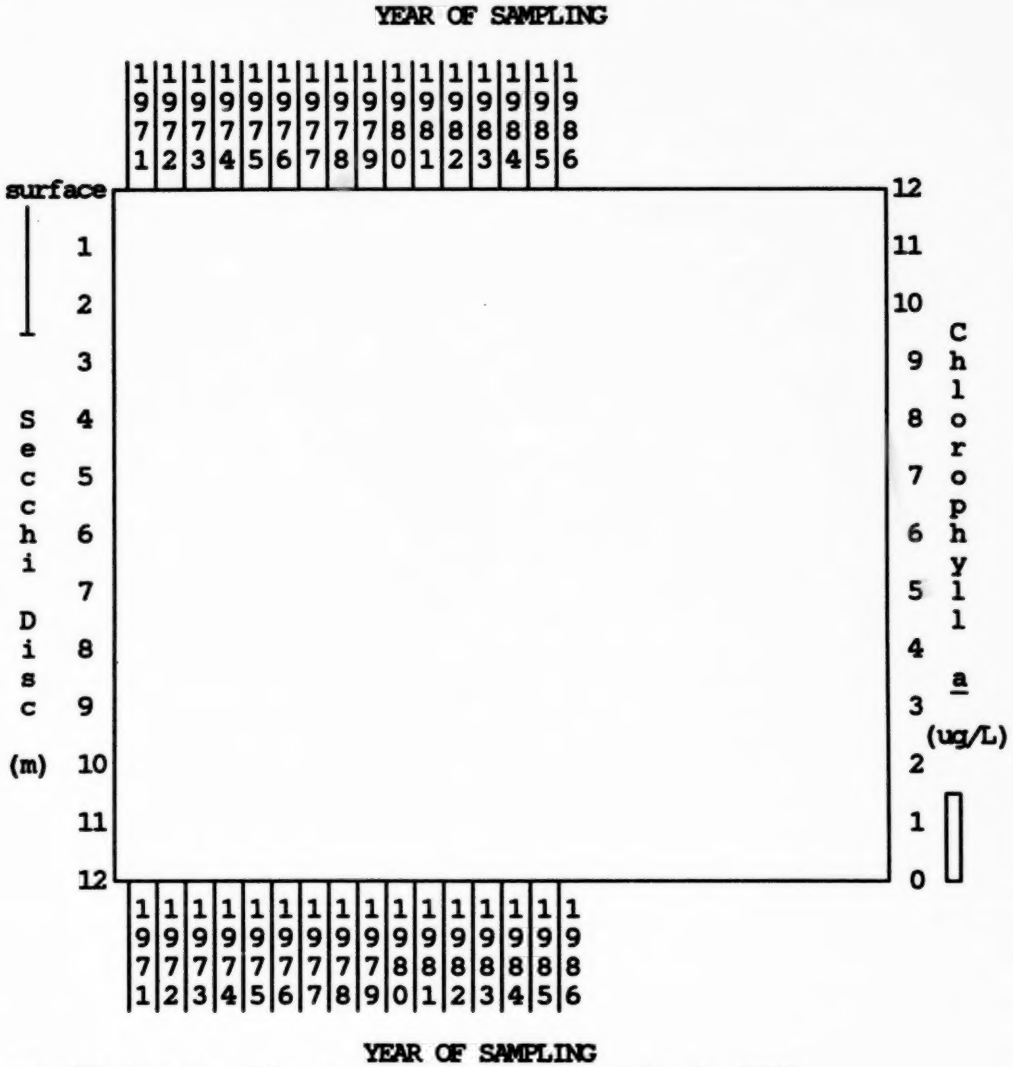
Insufficient sampling was done at this location on Wood Lake to obtain meaningful results.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Wood Lake (Off Day Island)
A minimum of 4 results were required for graphing.



Insufficient sampling was done at this location in 1985 to obtain meaningful results.

Figure 2 : Summary of results for Secchi disc (m) and chlorophyll a (ug/L) from Wood Lake (West Bay)
A minimum of 4 results were required for graphing.



Insufficient sampling was done at this location in 1985.
We hope that sampling is done at this location in 1986 with increased frequency.